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Architectural Commentaries of the Week.

OUR paper this week contains an unusual quantity of reported expression of architectural opinion upon architects and architecture, in the shape of Mr. W. H. White's vigorous and outspoken paper at the Leeds and Yorkshire Architectural Society, and Mr. Pink's opening address as President of the Architectural Association; and it is satisfactory to be able to say that the quality of the matter thus reported is proportionate to its quantity. Relatively speaking, in fact, it would be hardly fair to emphasise the idea of "quantity" at all in regard to the presidential address at the Association, which has the distinguishing merit of brevity as compared with the "lengthened sweetness long drawn out" of some previous presidential addresses from the same chair. Both addresses contain much that is true and well put; both derive a certain semi-official emphasis from the positions held by their authors respectively in relation to the Institute of Architects and the Architectural Association; and both touch a good deal on the subject of architectural education.

The Secretary of the Institute commences, however, by a reference to the much but surely unnecessarily vexed question of what an architect is, and in his reference to this subject he "not happy." He contrasts Mr. Street's dictum that architecture is an art, not a profession, with Sir E. Beckett's, that an architect who would make good buildings should dismiss all grand ideas from his mind, and "above all not call himself an artist"; and he thinks the latter is the nearer the truth of the two. We are sorry to see Mr. White thus going over to the enemy. It is perfectly true, unfortunately, that Street's great building is an example of the fact that an architect cannot afford to be an artist alone. But as to the opposite view, to which Mr. White has very unnecessarily given his support, it is simply the argument of the fox that lost his tail. "I am no artist, therefore an architect need not be an artist; I cannot draw, therefore drawing is unnecessary for architects"; that is the naked statement of the case. The argument is absurdly and illogically used, that because some great and successful buildings were contrived and erected by men who could not draw, therefore not to be able to draw is a probable element of success. We have surely had enough of this nonsense. And as to the miserable advice, the shibboleth of persons destitute of any high enthusiasm, to dismiss all grand ideas from the mind, is that the spirit in which Mediæval cathedrals were built? We trow not. "Aim high and you will strike high," is a sound old proverb, as true now as ever. Dream of producing something great and poetic in architecture, and if you do not realise something great, you will at least come nearer it than if you did not dream of anything beyond business common-places.

So much for our disagreements with Mr. White. The offending passage occupies but a small part of his paper, but it stands at the head of it, and casts a sinister light over the remainder, which we would rather have been spared. The argument, implied rather than expressed, seems to be that architecture, being a "profession," stands especially in need of a professional representative body, which it never had in times past, not having been then a profession in the sense in which it is so now. When the sun of the Institute arose upon it, then the profession of architecture began to take form and substance, and to be duly qualified for recognition. This view is natural to an energetic secretary, of course. Others may take it *cum grano*. But, in what Mr. White proceeds to say as to the Institute, and what it might, could, would, or should do for the profession, we are mostly disposed to agree. More particularly do we concur with him in supporting that view of the proper constitution of the representative body which excluded all persons commercially interested in the materials of building. In comparison with some certain other Institutions which are cited, the Institute might have had a larger number of members but for this restriction; but it may well be asked whether the leading architects of Continental capitals would have cared in that case to become honorary and corresponding members of the English Institute.

Another passage in Mr. White's paper which we read with sympathetic surprise,—or, shall we rather say, with surpriseful sympathy,—is that in which he, with official knowledge of the facts, tells us that there is no foundation whatever in the powers conferred by the Charter of the Institute for setting up as an article of faith the system of five per cent. charges, or for attaching the idea of "Rules" of the Institute to the paper of suggestions put out some years ago as to architects' charges. This, we are now informed, is not binding at all, and membership of the Institute involves, we are told, no obligation beyond that of honourable dealing in matters of business. This, we imagine, will be matter of surprise to many Fellows and Associates who have been accustomed to regard five per cent. as one of the sacred laws of being. It appears, however, that if an architect has but a small conceit of himself, he is not dishonourable for charging less than five per cent., neither (if his self-appreciation be more developed) for charging more, if he can get it. We hope this expression of opinion, which we presume we may take as correct, will lend a helping hand towards the overthrow of that ridiculous percentage-charging altogether, which is a consummation devoutly to be wished. It is utterly illogical; it exposes architects constantly to the suspicions and innuendos of people who do not perceive that the members of a profession which charges by the amount of money it makes the public spend, may, in spite of such a system, be individually perfectly fair dealers; and it gives many people an erroneous idea that no other charge is right or allowable under any circumstances, so that we have heard people say, in regard to an architect's account for designing decorative work in which the material value was small compared with the artistic work, "I thought five per cent. was the usual charge for everything." The sooner the profession throw over the five per cent. dogma the better.

We are very glad that Mr. White speaks so decidedly in regard to the system by which architects, members of the Institute, and who are also members of the Board of Works, are professionally concerned in the purchase and sale of building sites by the Board. Mr. White recalls the vigorous protest of Mr. Street on this subject, when he expressed his strong opinion that a Fellow or Associate who became a Member of the Board of Works ought not to have any professional connexion with the purchase or sale of land by the Board. It is unpleasant to find that it is necessary to reiterate this protest, and it certainly seems either that the Institute has slackened its hands or that its members, or some of them, are virtually out of its control. We have reason to believe that it is so in some other matters; for instance, in regard to the exceedingly right and wholesome regulation that no member should have a commercial interest in materials used for building purposes or in immediate connexion therewith. We know that this is occasionally, at all events, evaded and treated as a dead letter. We have once or twice seen circulars from architects who were members of the Institute recommending their own patents for this or that improvement, the commercial interest in which was apparently in their own hands. These things ought not so to be. The immediate moral of the matter is, however, that all who wish well to the profession should combine to strengthen the hands of the Institute as much as possible, especially at this auspicious season of reform and expansion;

because the more the Institute is strengthened and supported, the more it becomes a desirable and even a necessary thing for architects to belong to it and to keep well with it, the more power will it have to keep in order these erratic brethren who tend to give cause to the enemy to blaspheme.

The remarks which Mr. White makes upon the action taken by the State in regard to architecture in this country,—a subject which he has made his own through the recent publication of his able little book on the relation of the State to architecture in France and in England,—equally merit attention. There is probably, as he intimates, little chance of the State seeing the error of its ways in this respect until we have, at some happy moment, a First Commissioner of Works appointed who really and in the broad sense understands the subject, and will have the originality and independence to take up a new line and leave a new precedent for his successors.

Mr. White concludes his paper with a protest in favour of education, the subject with which Mr. Pink's Presidential address is almost entirely occupied. The view of the subject taken in this latter address is as wide and as well balanced as we could wish to see it, and leaves little or nothing either for dissent or for addition, as, indeed, seems to have been felt by those who took part in the discussion which followed. Mr. Pink is able to speak warmly in favour of the artistic view of architecture; in favour, too, of that "enthusiasm" without which nothing great can be done, while at the same time emphasising the necessity for sound scientific training. The younger members who heard, and those who will read his address, cannot do better than adopt the views which he so ably set forth in regard to the scope of architectural work and the lines of study necessary to ensure success of the highest kind in it; not the mere commercial success, but that kind of success, too little valued in the present days of pushing and elbowing for the rewards of fortune, which consists in being able to do what has to be done as well and as thoroughly as possible. Professor Kerr, whose speeches at the Association, always well delivered and to the point, have become a feature looked for on these occasions, also gave his allegiance to the enthusiastic side, and suggested that there was a want of that quality in the meetings held in another room of the house in Conduit-street. We fear that in that said room we have occasionally heard the Professor's always fluent oratory engaged on the other side of the question, and bent towards throwing cold water on the aspirations of those who would regard modern architecture as a subject for loving pursuit. We will hope that those were the Professor's bad moments, or that he has repented, and that what he said at the Association on Friday represented his more genuine and permanent sentiments. We cannot but express gratification also at the tone in which the projected changes and improvement in the constitution and policy of the Institute were spoken of at the meeting of the younger society. The Institute is, we may hope, making a real effort to go out of its groove, too long persisted in, and to act in a larger spirit for the good and advancement of the profession. It has received a great deal of encouragement and support from the expressed opinions of the younger members of the profession, who will in the future reap the advantages of the reforms now provided. It is for the Institute to see that it does nothing to falsify or disappoint these hopes.

A point was touched upon by Mr. Aston Webb in the course of the discussion on the President's address, which has, to our thinking, more direct connexion with the scope and subject of the address than appears on the surface. This was in respect to the want of appreciation of each other's work with which architects are credited (or discredited) in comparison with other classes of artists,—a charge which is better founded than one would wish it to be. The present Professor of Architecture at University College spoke, years ago, very strongly, about the want of *esprit de corps* in the profession, a want which a better and more generally popular policy at the Institute would do something, we hope, to lessen. But the feeling referred to by Mr. Webb as commonly supposed to exist, of want of sympathy with each other's work, arises, we believe, in great measure from the want of that broader culture which Mr. Pink suggested as desirable; the habit of adopting a special style, even a special school of draughtsmanship, as the test of excellence in architecture. This narrowness of view may be, often is, perfectly honest; it is none the less narrow, and is the result of a one-sided education, a mere adherence to an adopted style or manner, without consideration of the really important qualities which underlie this outside face of architecture, and which may be displayed equally in buildings of very different styles. A man who has made up his mind that Gothic is the road to architectural salvation regards the man who practises one of the varieties of Renaissance as a weak and deluded brother. A wider view of the subject would enable him to see that however his own predilections lead him to favour one special style, another's predilections may, from his point of view, be as reasonable; and that sound construction, effective plan, and artistic treatment, may be realised under many different forms of architectural expression. The broad basis of architectural education suggested in the address of the President of the Association would leave it hardly possible for this one-sided and unsympathetic view of each other's work to prevail among architects to the extent to which it does. Of course there is naturally a difference between architecture and engineering in this respect. An engineer has a practical problem to solve; he solves it, or does not, and whether he does or not is a matter capable of absolute demonstration. Architecture being in part at least an art, does not admit of this sort of demonstration: the question *de gustibus* comes in. But there is room for much more catholicity of taste and sympathy than at present exists, and we expect the architect of the future will learn this lesson more or less completely before long.

A MODE OF PROTECTING IRON WATER-PIPES, IRON SOIL-PIPES, AND IRON PIPES GENERALLY, FROM RUST.

BY H. BOWES SCOTT.

THE constantly increasing use of cast and wrought iron pipes for purposes of water supply, and working of sewerage and house drainage, leads the writer to offer this description of a process by which, without destroying the tensile or crushing strength of the metal, the life of an iron pipe exposed to water, internally or externally, may be indefinitely prolonged, and this without producing any of those objectionable effects due to the use of a metal lining or of a waterproofing composition, whilst at the same time the interior of the pipes and mains is kept entirely free from rust, so objectionable in water required for washing linen and so injurious to the tightness of water fittings. This process, instead of injuring the iron, is found to toughen it.

This, which is termed the Bower-Barff Process, is the joint invention of Professor Barff and Mr. George Bower.

In Professor Barff's process the iron and steel and steel articles at a red heat are subjected to the action of superheated steam, by which the steam is decomposed, and the oxygen combines with the iron, forming magnetic oxide.

The Bower process consists in submitting the metals at a red heat to the action of ordinary air and carbonic acid gas, produced by the combustion of carbonic oxide inside the chamber in which the articles are treated.

The Barff process is direct and continuous, and forms the magnetic oxide directly by the decomposition of water. The Bower-Barff process is intermittent, the magnetic oxide being formed by a series of oxidising and deoxidising operations. The process now under consideration is a combination of the two. It is being carried out at works in London and the provinces.

The chemical description of the process is as follows:—

The excess of oxygen in the furnace in the first place produces Fe_2O_3, or sesquioxide of iron, and the under surface of this, being in contact with metallic iron, undergoes reduction to magnetic oxide in the following manner:—

Four equivalents of sesquioxide unite with one of metallic iron, forming three equivalents of magnetic oxide, or symbolically (3) $4\ Fe_2O_3 + Fe = Fe_3O_4$.

The furnaces can be made of various sizes. Some in use are of the following dimensions:—36 ft. long, 6 ft. 6 in. wide, and 6 ft. high; others are 13 ft. by 4 ft. 3 in. by 4 ft. 3 in. They are built of fire-bricks, supported and strengthened by ordinary T or channel iron.

The gas-producers are three or more closed hearths, each provided with a hopper above for the admission of fuel,—the fuel used is a non-coking gas coal: of this about 7 cwt. per day is sufficient for a furnace, 13 ft. long by 4 ft. 3 in. high. Anthracite can be used equally effectively, if petroleum at the rate of about a gallon per hour is dropped into the gas-producer.

The carbonic oxide, from the combustion of the fuel in the producers passes along a conduit, under the control of a sliding door, to the openings, where it meets heated air ascending, and is consumed. The products of combustion, after being mixed with steam from a boiler at about 20 lb. pressure, are then conducted along a passage packed with open-built firebrick walls at intervals, by them they are thoroughly mixed; they then return along another and lower passage, and enter by means of narrow oblong holes the chamber, or furnace proper, in which the iron articles to be treated are placed.

After having passed over, and amongst these, the waste gases escape downwards through ports into the regenerator-chamber, and thence to the chimney-flues, heating in its passage the fireclay-tubes composing the regenerator which are supported by cross-walls. Cold air enters the apparatus through a channel provided with a regulating valve, under the control of the furnace-man. This air then passes along the lower rows of regenerator-tubes, and back through the upper tubes, thus becoming highly heated by the waste gases.

It is a remarkable feature of this process that not only does it protect from rust, but it gives a verypleasing colour to the articles; and that the cost of treatment, except in the labour of handling, is no more for 2,240 articles, each weighing 1 lb., than in treating one article weighing 1 ton, the process being dependent on the searching flow of heated gases and steam following the most intricate pattern or bend.

When completed the article may be left in its natural state, or coated with paint or varnish, with the certainty that the varnish or paint will never peel off or be dislodged by the action of the iron beneath it.

For ornamental iron-work a pleasing and permanent bronzing effect is produced by rubbing the Bower-Barffed surface with copper or brass wire brushes. Small metallic particles will become ingrained in the surface, more especially on all prominent parts: this gives exactly the appearance of a bronze casting for ornamental ironwork for houses, churches, and public buildings. This process gives a most pleasing and permanent effect.

Arrangements are, of course, made when constructing the furnace by which a cradle, containing a large number of small iron articles, can be stacked outside the furnace and afterwards drawn into it by means of a chain, much in the same way as larger cores are treated in a foundry core oven.

In conclusion, it will be as well to point out that this process enables iron pipes of small size to take the place of lead for service-pipes at less than half the cost, and with absolute immunity from any risk of metallic poisoning, no matter how soft the water may be. The advantage of being able (without producing rust and its attendant disadvantages) to con-

struct all service-pipes and joints of the stronger and cheaper material scarcely requires pointing out; this is more especially the case in districts where pressure is high and where the system of supply is constant. There are in this country alone vast numbers of villages without any adequate water-supply. Many of these are from time to time adopting gravitation and even pumping schemes, the water being supplied at stand-pipes, and only rarely being brought into the cottages in consequence of the expense. These villages might have the supply taken into every cottage at an expense only slightly in excess of the cost of stand-pipes if wrought-iron Bower-Barffed pipes were adopted, whilst the comparative merit of the scheme, which brings the water into the house rather than leaving it to be carried, scarcely requires drawing attention to.

The increasing use of iron for soil-pipes and house-drains opens another and a large field for the Bower-Barff process.

The advantage of preserving the interior of the soil-pipe somewhat cannot be overrated. This has hitherto been difficult to ensure, as the ordinary iron-pipe has been very liable to rust and corrode.

NOTES.

THE deputation received by Mr. Chamberlain last week on the subject of railway charges probably represented every trade and industry of any importance in the kingdom. The Mayor of Birmingham introduced the deputation, and explained that the aspect of the "terminals" question had been so materially altered by a recent legal decision that they wished to urge afresh the necessity for putting it out of the power of the railway companies to impose these charges. We understand that some of the rates from Birmingham and district have recently been reduced, showing that the efforts of the different bodies who have pressed this question so perseveringly have not been without success. But with the old-standing grievances of "undue preference" and "terminals" still unredressed the conflict between traders and the railway companies will still go on. The former question does not appear to have been brought forward at the interview referred to, and with regard to the latter, Mr. Chamberlain seems to hold entirely different views to those expressed by the deputation. In the Bill bearing upon this subject introduced by him as President of the Board of Trade, these charges were to be legalised, and the clause was regarded as an inducement to the railway companies to compile the new classification and scale of rates required by another clause. But Mr. Chamberlain explained last week that he had always considered the companies entitled to make terminal charges, his opinion being in favour of fixed sums to be settled by Parliament or the Railway Commissioners. It has been well said that if these charges were legalised there would be a precedent which the companies could use for charging passengers certain sums in excess of the Parliamentary maximum for the various services performed and accommodation provided at the stations, some of which were not thought of when the fares were fixed. We hope that the matter may yet be argued out in Parliament, as it is not likely that the traders would desire anything manifestly unfair to the railway companies any more than Mr. Chamberlain himself.

IT is to be hoped that the Metropolitan Board of Works will not be deterred by any idea of false economy from purchasing and securing Parliament-hill in perpetuity as an open space. To leave a large piece of ground so nearly neighbouring on Hampstead Heath to be built over would detract very much from the attractions of the Heath itself, and for its own sake the open space is most valuable in the neighbourhood of our increasingly-crowded city. It may be true that "the ratepayer is poor," but he will not feel this burden much, and it is a matter of health and recreation for generations to come as well as the present. Miss Octavia Hill makes a strong appeal in favour of the purchase in a letter in Wednesday's *Times*.

IN another column we give a brief report of the proceedings at Worship-street Police-court on Wednesday last, when a question of great importance was raised by one of the summonses taken out by the Metropolitan Board of Works against the builders of the blocks of artisans' dwellings in Chatham-gardens, Nile-street, Hoxton. The conditions under which these buildings are being erected were set forth in Mr. George Godwin's letter to us a few weeks ago, and were again mentioned in our last. The magistrate has decided that the passage or way between the blocks of dwellings is not a street within the meaning of the Act. We believe that another metropolitan police magistrate has given a decision to the like effect, while a third magistrate has, on the contrary, twice decided in the Board's favour on the same point. It is to be hoped that the Metropolitan Board of Works will take steps to clear up the point in dispute. Surely, it can never have been intended by the Legislature that an important provision of the Building Acts (Amendment) Act of 1882 should be evaded by the erection of a pair of iron gates, as is, it seems, the intention in the present case. The erection of the gates will not affect the vital question whether artisans' dwellings, erected under such conditions of light and air as in the case of those under notice, can possibly be healthy. Mr. Grain, who certainly availed himself to the full of "the licence of counsel" (if, indeed, his continual interruption, contradiction, and paraphrasing of his opponent's observations be within the bounds of such licence) made much of the "philanthropic" aspect of the case. Were the Joint Charity Estates Trustees, he asked, to be hindered in their beneficent desire to provide better dwellings for the poor? The magistrate, we fear, was a little carried away by this appeal, and so probably did not appreciate the full gravity of the case. It cannot be too often repeated that however much we may "improve" the construction and fittings of the dwellings of the poor, all the "improvements" will be to a very great extent thrown away if the dwellings are at the same time deprived of adequate light and free circulation of air. The difficulty of bringing points raised under the Building Acts within the comprehension of the average magisterial mind seems to point to the necessity of either appointing technical assessors to assist the magistrates, or establishing a special court or courts for dealing with such cases.

THE opening of the Law Courts after the Long Vacation sees also a much-needed alteration in their structure. There is now a staircase from the north end of the great hall up to the north corridor. This staircase adds much to the facility of access to the courts, and is a standing protest, so to say, against the oversight of practical matters in the construction in the first instance. But this staircase is, though a necessary convenience, wholly unworthy, architecturally, of being the chief means of access from the hall to the courts. It is a mere back staircase, quite small in size, not so wide, indeed, as the staircase which connects the barrister's north robing-room with the north entrance. Of course it will answer its purpose but it is still much to be regretted that the authorities have not been able to build a staircase from the great hall up to the north corridor of a size and dignity fitting for such a building. That it is possible to do so is quite certain, but we presume it was decided to make the alteration as cheaply as possible.

WE hear with great regret of the death of Mr. A. J. Grahame, a young architect, pupil of Mr. T. G. Jackson, who had given promise of eminence in his profession, and had also taken up the occupation of a University Extension lecturer. He died from the effects of a fever caught in Italy in the course of a sketching tour which he took earlier in the present year with the view of gaining further material for his lectures. Among the drawings awaiting their turn for publication in this journal is a design of his for a church, which he brought to us himself some months since, and which we will publish immediately as an example of his work. He was an exemplification of that standard of general culture in an architect which is spoken of as so desirable in the course of a paper printed elsewhere in the present number. His early loss is much to be deplored.

THE recent commemoration of the Huguenot bi-centenary amongst the French congregations in England should be an interesting event to Englishmen in some senses, when, by the infamous Revocation of the Edict of Nantes, the Huguenots, who had previously had secured to them liberty of conscience and freedom to pursue their various vocations, were forced to fly for their lives to the more tolerant and genial protection of our shores. This protection was paid back to us a thousandfold, for the immigrants brought with them the knowledge and skill in those trades, principally textile, which have for so long a period, formed one of the chief supports of English prosperity. Indeed, we may safely say that, had it not been for the Huguenots and Walloons, this country would have been a long way in the rear as regards industrial supremacy. The linen trade was originally started in Ireland by the Crommelins, a Picardy family, whose descendants are still to be found in Antrim occupying good social positions. The baize manufacture was also introduced by the Huguenots into Kent, and flourished for a considerable time in the neighbourhood of Sandwich, whence it was eventually transferred to Lancashire and Yorkshire. Our earliest market-gardeners (as a systematic industry) came from their ranks, while several minor trades, one of which was wax-bleaching, took root in Canterbury and its vicinity. It may not be generally known that a very tangible relic of Huguenot times is still to be found in that ancient city, in the shape of a French service held every Sunday in the crypt of the cathedral, while traces abound all along the Kentish coast in names of distinctly French and Flemish origin. It may not be amiss for us, with our strong insular notions of superiority, to keep in our mind the fact that we owe our chief successes in industrial enterprises to foreign importation.

THE Amalgamated Society of Railway Servants have made the very practical recommendation, in regard to the important question of automatic or improved coupling appliances on railways, that a trial with the full-sized working appliances ought to be made, as the only reliable test. They talk of setting aside a sum of money to award in prizes to the inventors of the most successful couplings. Surely the railway companies themselves ought to do something towards the expense of ascertaining the best form of coupling to use. It appears that 130 men were killed last year in the course of shunting. Of course there may be contributory negligence, but any one who has watched the operations of shunting and uncoupling goods trains must have perceived that the present system cannot but be highly dangerous to those employed, even with the greatest care on their part. It is anything but creditable to the great railway companies that they should allow this annual slaughter to go on and show no sign of doing anything to render it less inevitable, for to some extent it is practically inevitable with the present clumsy and antiquated appliances.

WE have received the illustrated syllabus of the course of instruction in drawing in primary schools under the English and Scotch Code for 1885. It commences with the very simplest geometrical figures, parallel lines, angles of various inclinations, &c., going on to simple freehand drawings. The subjects are not first-rate in style, it must be admitted, but they may serve the purpose of educating the infant hand and eye. That the subject should have been established as an integral part of

primary education is in itself a great step, and one which will not be without its results. The curious thing is that we should have been so long in coming to it.

WE hear that the Midland Railway Company have ordered a sample quantity of 5,000 steel sleepers from Belgium, the English steel-masters who were applied to not having the plant necessary for the work, and wanting a higher price (to cover the initial expense of the plant) than the railway company were disposed to give. If steel sleepers are adopted more largely this difficulty about the English supply will, of course, be got over; but the incident is somewhat significant of the importance of being abreast of the demands of the day.

FOLLOWING in the wake of the anti-restoration movement in England, there appears to be an increasing feeling against the unnecessary rejuvenation of old monuments in France. The last number of the *Chronique des Arts* contains a long and strong letter from "A Subscriber," calling attention to the manner in which the ancient building, known as "Le Monnaie," is being scraped by masons, who are depriving not only the walls, but the old sculptures, of the toning and preservative coating of time. "I saw, in fact," he says, "four practitioners scraping and cutting, with an evident confidence in their own skill, at the graceful figures of Dupré and Caffieri, representing the Earth, the Air, the Water, and the Wind.* Under their chisels the figures were rapidly losing their tints of age, and at the same time their delicacy of form and modelling, to appear all white, doubtless to the great satisfaction of the passers-by." In a similiar tone, M. Adolphe Guillon, the painter, writes in the same number of the *Chronique* to protest against the announcement of a somewhat similar treatment threatened against the old tower, called that of the "Ducs de Bourgogne," and he quotes a newspaper paragraph, which might have come out of an English "daily,"—"'La vieille tour de Jean sans Peur, restaurée et rajeunie, constituera un des spécimens des plus intéressants de l'architecture des habitations fortifiés du XIV^{e} siècle.' *Restaurée et rajeunie!* Mais, si elle est *restaurée* et *rajeunie!* elle ne constituera plus un spécimen de l'architecture du XIV^{e} siècle," which unquestionably is as true as it is lamentable. It is perhaps some consolation to find that fools are the same in all countries: we have no monopoly of the tribe.

WE have received from Mr. A. B. Mitchell, who was the winner of the Soane Medallion this year, and whose design for a bank we publish in the present number, a very well got-up monograph of the interesting church of Shottesbrook, near Maidenhead, containing measured drawings of the plan and elevations, the tombs and brasses, profiles of mouldings, &c. The volume is a highly creditable production, and shows, along with Mr. Mitchell's other work, that he "means business." We must put a note of interrogation, however, to one remark in his preface, where he excuses himself for a fresh publication of the church (in view of the fact that Mr. Butterfield in 1844 published a very complete description and illustration of it), on the ground that "the methods of reproducing drawings by photo-lithography are so great an improvement on the old system of engraving." For geometrical elevations they are, no doubt, and no doubt some lithographed perspective views are much better than some engravings. But there are engravings and engravings; and when the graver is in the hands of a man who knows how to use it with artistic feeling as well as with correctness and truth, it gives a firmness as well as a balance of tones and half-tones which lithography cannot give. The deficiencies of lithography in this respect are pointedly illustrated in the one little perspective in Mr. Mitchell's own book, in the corner of plate 9. An engraver who knew what he was about could have made a far better thing of that.

* Is this unusual definition of the four elements correct?

THE *Berliner Philologische Wochenschrift* (Oct. 10) reports a very interesting discovery at Eleusis. Some years ago, as is well known, the remains of a great assembly-hall, supposed to be used in the ceremony of initiation into the Eleusinian mysteries, were laid bare. This assembly-hall was supported by forty-two columns, and was planned by Iktinos, the architect of the Parthenon. There was always the *presumption* that it was erected on the ruins of an older temple destroyed by the Persians. This presumption has now become a certainty. Digging deep down below the foundations of the Iktinos temple, the excavators have come upon the remains of a square building, undoubtedly the older sanctuary. It fits exactly into the north-east angle of the Temple of Iktinos, so that a part of the north and east walls of the earlier and later buildings are precisely coincident. It is the intention of the Government, for the better preservation of these most valuable ante-Persian-invasion remains, to fill in the excavations again, but in such a manner as to leave the upper part of the ancient structure just visible.

FROM the same journal we learn that excavations carried on at Eining, in Lower Bavaria, have met with extraordinary success. The remains of a great Roman military station have been discovered; so perfect is the preservation, that the heating apparatus of a part of the building is still serviceable. It is delightful to hear that, by a happy fortune only too rare in the annals of excavations, the "find" of precious objects has already more than paid the outlay. Among the most noteworthy of the discoveries we may mention a number of weapons of various forms hitherto uaknown,—tools, domestic apparatus of every description, a great number of potters' stamps with names that are new to archæology; some medical instruments, valuable rings set with turquoise, lapis lazuli, jasper, cornelian, opals engraved with figures of Mars, Jupiter, Amor, Victoria, Fortuna. To add to the value of the discovery, a long series of coins have been found, dating from Nero to Valentinian II., among them some very rare specimens of emperors who only reigned a very short time. The local museum where these treasures are to be permanently stored will become of high importance to Roman archæologists.

WE hear that the Church of St. Sebald, at Nuremberg, is reported to be falling into rapid decay, and the architects who have examined it state that if steps are not at once taken for its restoration it will in a very short time be irreparably ruined. The cost of the necessary repairs is estimated at 40,000*l.*, and application has accordingly been made to the Government to sanction the formation of a society for raising the sum by subscriptions.

THE *Courrier de l'Art* publishes a report to the Minister of Public Instruction on the subject of mosaic, signed by MM. Guillaume, sculptor, Lenepveu and Lemare, painters, and Ch. Garnier, Moyaux, and Sédille, architects. The signature of M. Müntz, Conservator of the École Nationale des Beaux Arts, is also appended to the document. The object of the report is to indicate the line which modern mosaic should take, and the aim which artists in that work should keep before them. The memorialists are opposed to the prominence given to Byzantine influence by modern mosaic students, and emphasise the idea that mosaic is in fact a classic Roman rather than a Byzantine art. This is characteristic of the French artistic mind, though it will seem a profanity to some of our own decorative artists and architects who are so much enamoured of the stiff architectural forms of Byzantine mosaic art, grand no doubt, but expressionless. The French memorialists, however, are careful to point out that the opposite excess of too much movement, realism, is quite at variance with the genius of mosaic. Raffaelle, they suggest, in the mosaics of the Chigi Chapel, had hit the golden mean. We subjoin the paragraph in regard to the Byzantine school:—

"Si l'école byzantine, dont le triomphe ne s'affirme qu'à partir du VI^{e} siècle, ne saurait revendiquer en aucune façon l'invention de la mosaïque d'émail, elle n'est pas qualifiée non plus pour imposer exclusivement ses modèles, comme elle semble sur le point de le faire, à l'art renouvelé, renaissant, de la mosaïque. Insister sur l'antériorité des efforts tentés par l'antiquité classique, ce n'est pas seulement élucider une question d'histoire, c'est surtout mettre les artistes modernes en garde contre des influences dangereuses. L'instinct du public ne s'est pas trompé lorsqu'il a attaché au terme de mosaïque byzantine l'idée d'un style pauvre, froid, et vide: en puisant uniquement dans des productions dont la grande majorité relève de l'archéologie plutôt que de l'art, nos artistes couraient risque de donner raison aux préventions populaires. Quelques pages d'un style plus libre ou plus ample, certaines parties des mosaïques de Saint-Marc de Venise, de Sainte-Sophie de Constantinople, ou encore de Palerme et de Montréal, ne sauraient faire oublier tant de productions dont la vie, la pensée, le drame, en un mot, tout ce qui forme la raison d'être de l'art ont été systématiquement bannis. Qui oserait, après un instant de réflexion, entreprendre de ramener l'art contemporain aux règles étroites de l'école byzantine!"

WE regret to have to record the death at Croydon last Sunday of Mr. W. H. Lascelles, who was so well and favourably known to many of our readers for his energy, ability, and high character. His inventiveness and enterprise, especially in the use of concrete (not only constructively but decoratively), and in other directions, have frequently been commended by us, and were widely appreciated by several eminent architects under whom he erected mansions and other buildings innumerable. In consequence of declining health he retired a few years ago from the business at 121, Bunhill-row, which is still being carried on by his successors.

WE have commented strongly several times lately on the reprehensible habit of addressing circulars to architects offering them commissions on the introduction of work or the employment of materials, and have given the names of those who did so when architects have forwarded such circulars to us. A letter in another column of this number, from "A Local Surveyor," who is a person holding a position of trust and responsibility, affords a still more pointed comment on this practice, and on the line we have taken in regard to it. The local surveyor suggests that any person offering to bribe an officer of the local authority should be liable to a substantial penalty. We hope this suggestion will not fall to the ground. Of course, in the case of a public officer there is a more legally recognisable impropriety in offering such bribes than in the case of a private practitioner; but the *morale* is the same in both cases. An architect acts in the interests of his client; to offer him a pecuniary inducement to do otherwise is, if he is a man of high principle, to insult him; if he is a man of lower principle, or a struggling junior in the profession, it is to put temptation in his way. In either case the practice deserves the strongest reprehension and exposure.

The Surveyors' Institution.—The first ordinary general meeting of the session will be held on Monday, November 9th, when the President, Mr. E. I'Anson, will open the session with an address. Students proposing to enter their names for the Students' Preliminary Examination, to be held on the 19th and 20th of January, 1886, must intimate their intention to the Secretary before the last day of November. Students eligible for the Proficiency Examination, to be held in April, 1886, must give notice of the sub-division in which they elect to be examined, not later than the last day of November. Examinations qualifying for the classes of Professional Associates and Fellows will also be held in the month of April next. Names of applicants for these later examinations to be sent in before the 9th of January next.

FLOWERED AND OTHER QUARRIES.

PART THE FIRST.

The term "quarry" or "quarrel" has been used to designate those diamond-shaped panes of glass with which both the windows of churches and religious and domestic houses were glazed in times gone by, and which are still made use of, with adaptations and modifications, by architects, glass-workers, and church restorers even to the present day.

We find that at Taynton, near Burford, Oxon, and at Headington, in the same county, the term "quarry" is used to describe a diamond-shaped piece of freestone or marble which is sometimes inserted for ornament in the borders of pavements. A "band quarried" appears to be a technical term. "A marble floor, of black and white squares, with a border of whin-stone quarried," *i.e.*, in diamond shapes, occurs in a Buckinghamshire builder's agreement of the year 1772.

Some persons maintain that the technical word "quarry" comes directly from the French *carré*, "a four-sided figure." Others that it is derived from the Latin term *quadrellum*, "a small square." Others, again, hold that it comes from an extinct Italian term, *cuarria*, *quaria*, or *quarria*, signifying a four-angled piece of mosaic,* glass, or marble, either for decoration, glazing, or inlaying. Hence, it is argued, its special adoption in describing the four-angled pieces of glass,—the "quarries" in question,—so universally used in glazing church windows. In many parts of England we have found that this term "quarry" is altogether unknown. For example, in the western part of Yorkshire and in the eastern part of England below the Trent. In both these districts the word "pane" is used to describe the figured glass under consideration. In France† and Belgium, as well as in Italy and Spain, the ordinary inexpensive glazing, as should be noted, has long taken this shape, more especially in country churches; while the same variety of figured ornament,—though differing somewhat in type and character,—is still to be found burned into the quarry.

Here, in England, the destruction of stained glass in general under the Tudors, as well as that which took place during the Civil War, together with the subsequent neglect of the Georgian era and the rough-and-ready restorations of the age in which we live,—well enough intended, but lamentably destructive,—have resulted in a vast and universal loss of such curious and interesting ancient examples, as in the days of Anthony à Wood, or even of Thomas Hearne, of Oxford, and Browne Willis, of Buckinghamshire, were still to be found here and there in abundance.

Five-and-thirty years ago the writer began to make a collection of such as could be frequently acquired for a mere song in the shops of various country glaziers, and gathered a certain number of curious specimens; and at the same time made sketches or tracings of nearly four hundred different examples found in the course of visits to various churches and old mansions during different archæological and ecclesiological rambles.* These sketches and tracings, as well as a few original specimens, have served in the main, after having been examined anew and tabulated, to furnish the information and illustrations here set forth. Since the period to which we have referred, however, from A.D. 1848 to 1856, we believe, from careful inquiry and subsequent personal research, that scarcely one third of the specimens of which tracings or drawings were then secured now remain. Such have been removed, lost, or destroyed. The glazing and lead-work of the old windows in which a few ancient specimens of quarries, much weather-beaten and worn, were then to be discovered, had obviously become so battered, imperfect, and unsafe that new and cheap modern "cathedral glass" mechanically made, all alike, and cut into identical shapes, were very largely substituted for that which was time-worn, curious, and interesting; and this latter, as a consequence, was too often irretrievably lost. Unless the local squire or parson was of archæological tastes, and took a pride in the local House of God and all its ancient details and antiquities, much of ecclesiological and genealogical interest was carelessly and ruthlessly destroyed.

Upon those flowered quarries of which we possess examples or original sketches, we find the rose, honeysuckle, marygold, coxcombe, gillyflower, broom, colombine, lily, poppy, cowslip, vetch, primrose, forget-me-not, primula, acorn, mushroom, flowering-grass, daisy, ivy, blue cornflower, ragged Robin, poppy, trefoil, vine-leaves, sheaves of wheat and ears of corn (some represented archaically, others put into the form of a cross).

These, of course, all differ considerably in artistic merit. Some are but feebly designed; others, again, more especially the earlier specimens, are remarkable for the vigour of their treatment,—boldly drawn, with much effect secured by a few powerful touches and a judicious use of a few colours. Of these yellow, chocolate, or brown and black are generally found to predominate and to produce every politic and needful artistic effect. It is possible that a deep red may have been used of old, but this has faded or darkened in many cases after exposure for centuries. In some later examples a deep ruby tint has been introduced, but such instances are somewhat unusual and rare.

The Early English quarries, or those found in First-Pointed windows, are specially notable for the conventional style of their ornamentation, the boldness and breadth of their lines, and the stiff and vigorous drawing of the flower, leaf, device, or fleur-de-lys thereon represented. Their backgrounds are sometimes hatched with rude and bold cross-lines,—full of effect,—and, as a rule, they have no special borders nor bands, though to this last-named rule there are found to be several exceptions.

In the following descriptive list,—made from my own collection, numbering several hundreds of specimens,—we have in the main avoided verbose repetitions, describing only those varieties and specimens which, being special and peculiar in themselves, appear to deserve such description, with the view of pre-

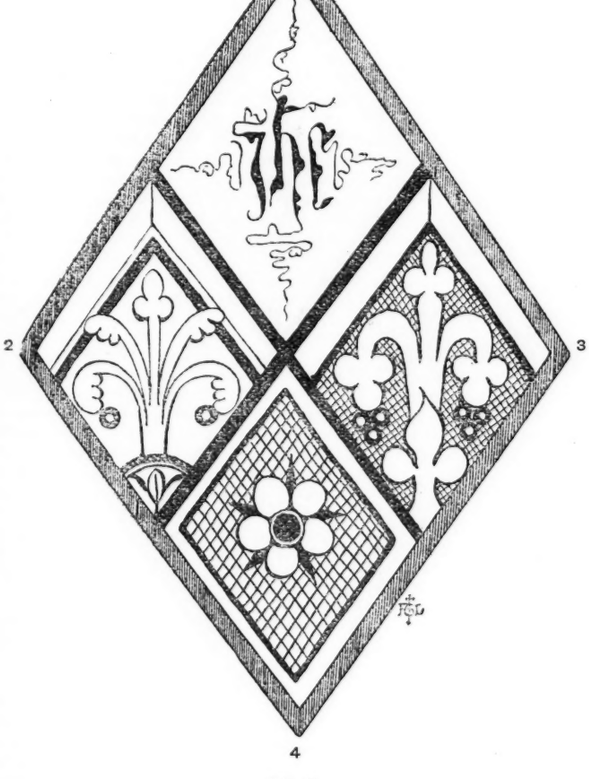


Fig. I.

1. Jesus College, Cambridge.
2. Upper Hardres, Kent.
3. Westwell, Kent.
4. Baulking, Berks.

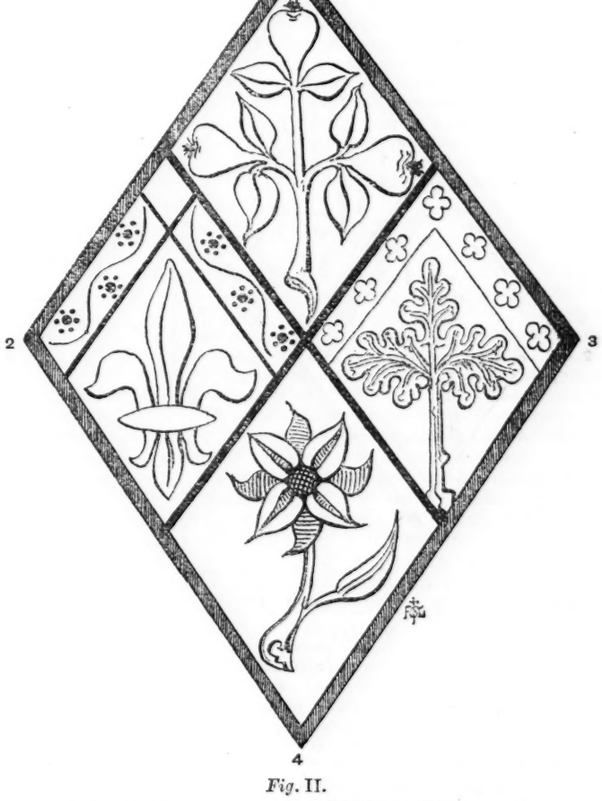


Fig. II.

1. Beckley, Oxon.
2. Sherrington, Wilts.
3. Winchester College.
4. Castle Morton, Worcestershire.

* The late Very Rev. Father Vincent Zanetti, of Murano, near Venice, an accomplished archæologist, in the autumn of 1877, afforded us the above information; and in the exact terms set forth.

† Several exquisite examples of flowered quarries still remain in Rouen Cathedral,—some of the most artistic and interesting being not diamond-shaped, but six-sided panes. For others, in the Cathedral Church of Chartres, M. Lasteyrie's "Histoire de la Peinture sur Verre," may be profitably consulted. Some examples therein set forth were reproduced in the late Mr. Henry Shaw's valuable "Encyclopædia of Ornament."

* These have been mainly taken in Bucks, Berks, and Oxon.

serving a record of such as stand so greatly in danger of destruction, and which, both from their obvious antiquity and archæological merit, are of considerable intrinsic interest. Many such have been utterly lost during the past forty years, and, in great probability, no sketches or traces of them remain.

The descriptions which follow are not arranged chronologically, though commencing with a few very early and well-known examples. It is not easy to determine the exact date of flowered quarries. On this point opinions widely differ. Most of those described, however, belong probably to the fourteenth and fifteenth centuries, the heraldic panes to the sixteenth:—

Lincoln Cathedral.—A leaf, boldly drawn, under a broad band, with cross-hatching behind the leaf, is found in several of the windows of this cathedral. It is outlined in dark brown.

Westwell, Kent.—A fleur-de-lys, similar in type and kind to that just described. Outline black.

Chapel of Prebendal House, Thame, Oxon.—A boldly-drawn fleur-de-lys, under two broad bands, bordered with a brown line. The flower outlined in dark brown.

Fulbourne, Cambridgeshire. — The flower known as "coxcombe," with two leaves, one on each side, archaically and somewhat stiffly treated; outlined in dark brown and coloured yellow.

Culham Church, Oxon.—A primrose plant, with three flowers and two leaves, all outlined in pale brown. (See illustration, fig. III., No. 3.)

Fulbourne, Cambridgeshire. — A star of six points in pale yellow, placed upon another star of a like character,—the latter deepened in effect by bold cross-hatching with black lines. The drawing is rude. (See illustration, fig. IV., No. 3.)

Checkendon, Oxon. — The sacred monogram Ihc in yellow, outlined in black upon dark-green glass. (See illustration, fig. III., No. 1.) The monogram of the B.V.M., consisting of the letters M and R conjoined, and crowned (Maria Regina), outlined in dark-brown; the letters and crown being yellow, surmounted with fleur-de-lys ornaments. A quarry of green glass charged with a label, on which the word memento is enscrolled, the label being yellow, and the inscription dark-brown.*

north side of the chancel in 1864, in the upper part of a window, when we made a careful sketch of it. (See illustration, fig. III., No. 4.)

Sherrington, Wilts.—Under a broad border charged with a wavy line between three spotted flowers, a bold fleur-de-lys in outline. The border and fleur-de-lys in yellow, outlined in dark-brown. (See illustration, fig. II., No. 2.)

Fawkham, Kent.—A large vine leaf outlined in dark-brown, with a double border of two bold lines on the two upper sides of the quarry.

Milton, Cambridgeshire.—A white rose on a stem, with tree leaves on a spray on either side, and two other leaves lower down upon the stem, one on each side. Both leaves and stem are in yellow. (See illustration, fig. IV., No. 4.) A spray of ivy, with berries at the head, the leaves boldly drawn, and alternately shaded in dark-brown and yellow, half of each leaf being left white.*

Doddiscombleigh, Devon. — A conventional flower, made up of three primrose-leaves, with two trefoiled sprigs between the leaves, one on each side. The centre of the leaves are coloured yellow, hatched with brown.

Winchester College.—A single vine-leaf on a perpendicular stem, under a brown border or

Fig. III.

1. Checkendon, Oxon.
2. Magdalen College, Oxon.
3. Culham, Oxon.
4. Hackington, Kent.

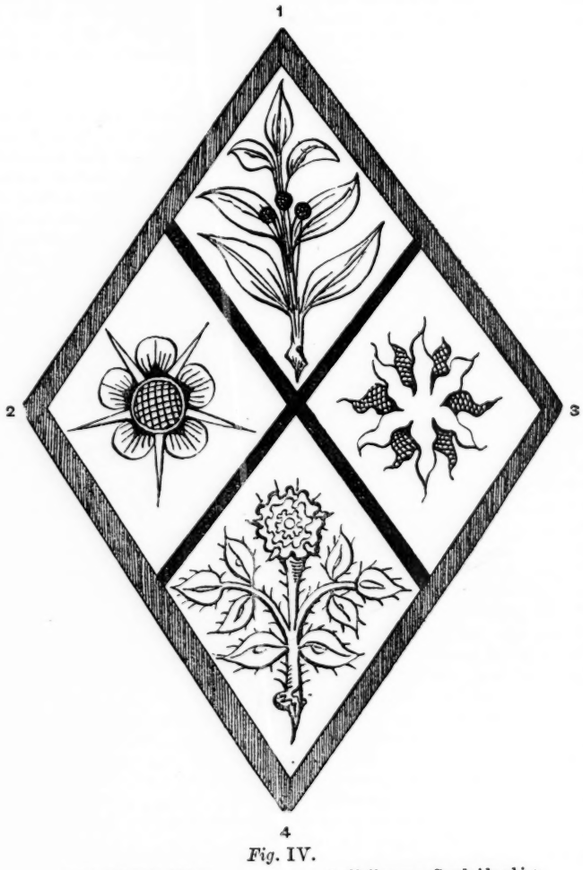


Fig. IV.

1. St. Alban's Abbey.
2. Kirby Malzard, Yorkshire.
3. Fulbourne, Cambridgeshire.
4. Milton, Cambridgeshire.

Stanton Harcourt, Oxon.—A leaf, probably of the vine, surrounded by a plain border on every side, may be seen on several quarries here. It is rudely but effectively drawn with an outline of dark brown.

Good Exeter, Essex.—A vine leaf on a stem, placed under a broad border, boldly outlined in black.

Fawkham, Kent. — An oak leaf under a somewhat similar border, outlined in dark brown.

Pebmarch, Essex.—A stem with three trefoil-shaped leaves under a bold border, outlined in black and conventionally treated.

Chigwell Church, Essex.—A boldly-drawn vine-leaf springing from a perpendicular stem, running throughout a quarry. This is artistically drawn in black outline and most effective.*

Upper Hardres, Kent.—Under a bold band, edged with a broad line in brown, a conventional fleur-de-lys of an early type. (See illustration, fig. I., No. 2.) [Independent of those here referred to and described, there are fleurs-de-lys of varying shapes at Southacre, Norfolk, Sherrington, Wiltshire; Emmington, Oxfordshire; Tisbury, Wiltshire; Watlington and Easington, Oxfordshire; Beverley Minster, and Tanfield, Yorkshire; and at Tewkesbury Abbey.]

Hackington, Kent.—A large half-opened rose-bud on a stem, out of which springs the figure of a female saint, with aureole, having flowing hair. In her right hand is a cross on a staff, in her left a box or a book, probably the former. The words Sc'a mavd'p,—possibly standing for St. Mary Magdalene,—are placed on either side in black letter above. This quarry is small in size, and much weather-worn. It was in the

band, two-thirds of an inch wide, charged with seven white quatrefoils,—a most artistic and effective quarry. (See illustration, fig. II., No. 3.)

St. Alban's Abbey.—A spray of smooth-leaved ivy, with three berries and seven leaves conventionally arranged, but drawn with irregular freedom, remained, in 1876, when I sketched it, in the window of a building to the south side of the south entrance of the Abbey Church. The outline and shading were dark-brown, the berries black. (See illustration, fig. IV., No. 1.)

Waterperry, Oxfordshire.—A floriated ornament of three leaves, developing three fleurs-de-lys,—all yellow, with brown outline.

Queen's College, Cambridge. — A primula flower, with three blossoms in white, their stems yellow, and with two spreading leaves, one on each side, in yellow.

Upper Hardres, Kent.—A primrose with three

* In many windows of Early English glazing,—notably in one in Mark's Tey, in Essex,—a vine pattern runs throughout the whole window, all the details being part of the general design. In the above-recorded example at Chigwell, the quarry, as regards design, is perfect and complete in itself. And it is only such as are complete in themselves as can be termed "quarries," and are described in this paper.

* In most quarries the labels do not fill the whole space, but are placed in the centre. The word miserere, we believe, occurs on a quarry in a chapel in the south transept of Salisbury Cathedral; and semper collettemur, in a window of Leigh Church, Surrey, near the monument of Sir Richard and Lady Arderne, A.D. 1494.

* A single ivy leaf, with a cluster of berries or fruit,—leaf being yellow, the stem brown, the outline and berries being black,—is represented on a quarry in a cottage in the oldest part of St. Alban's, said to have been brought from Sopwell Priory.

blossoms, one represented full and the other two sideways, in yellow, with four leaves springing from the stem, these leaves being half coloured in brown.

Beckley Church, Oxfordshire.—Three pears, on a single stem, coloured yellow, with four brown leaves. . . . . Three pears on three stems, shaded with yellow, with six leaves, likewise so shaded. (See illustration, fig. II., No. 1.)

Castle Morton, Worcestershire.—(From an old house; the quarry itself, now broken, in the author's possession.) A four-petalled flower, apparently a lily, with a single leaf, outlined in brown, and tinted with yellow.* (See illustration, fig. II., No. 4.)

Little Kymble, Buckinghamshire.—A butterfly with its head downwards, and its wings expanded. Yellow, shaded with brown.†. . . . . Other specimens with the head upwards, the body yellow, with red spots, and the wings yellow.

St. Mary Magdalene College, Oxford.—A single white lily-flower (part of the arms of the College), delicately outlined in light brown. See illustration, fig. III., No. 2.) . . . . A somewhat similar white flower, only with two varying leaves one on each side, springing from the stem. The leaves and pistils yellow. This remained in the window of one of the chaplain's lodgings in the year 1854. In 1884 it could not be found.

Baulking Church, Berks.—A conventional flower in yellow, with dark centre, outlined in black, and shaded in brown, with five single leaves arranged around it in the form of a star. A white border occurs round the whole. (See illustration, fig. I., No. 4.)

Melbury Bubb, Dorset.—A label, outlined in black and shaded in yellow, conventionally and artistically arranged, with the inscription, Dn's Waltrus Bokeler. This remains in the east window of the choir.

Ockham, Surrey.—A sprig of ivy, with a cluster of berries, and a leaf on each side. The stem yellow, the leaves white, and the berries dark brown.‡

Northmoor, Oxfordshire.—A stem of coxcombe, with two leaves and one blossom, outlined in brown, the flower being partly yellow. Here the excellent effect is obtained by bold, almost coarse lines, and by effective drawing.

Westwell Church, Kent. — A boldly-drawn, conventional fleur-de-lys under a white border. The flower is outlined in black, and its background filled in with cross-hatching in brown.

Baulking, Berks.—Here is represented a six-petalled yellow flower without stem; with rude cross hatching in black,—the whole surrounded by a narrow border of white.

King's College Chapel, Cambridge. — The blossom of a white lily is here represented sideways, with stem curved, and bold shading in brown throughout it.

St. Cross, near Winchester.—A rude, five-petalled flower, with five triangular leaves around it, placed under a white border outlined by a single broad brown line.

Garsington, Oxfordshire.—A leaf and head of a poppy upon a curved stem outlined in brown, with a cross-florey placed within a diamond to the left. On the two lower sides of the quarry is found a border of bold double lines.

North Moreton Church, Berks.—Within broad borders of double lines, two of which only are coloured yellow, four conventional leaves of the same tincture are found conjoined in the form of a cross. . . . . A somewhat similar quarry, with only one border,—the foliated cross being less simple and vigorous, but more elaborately finished.

Marsh Baldon, Oxon.—A conventional floral cross of white, placed within a four-sided diamond-shaped figure in yellow, with trefoil outlines in brown at the corners. . . . . A conventional floral cross, with a four-petalled blossom in the centre, the arms of the extended cross ending in fleurs-de-lys. Colour, dark brown and yellow.

Horsepath, Oxon.—A sheaf of wheat, boldly drawn,—the corn yellow, and the outline in pale brown.

Nether Winchendon, Bucks.—A conventional floral cross of yellow, with a four-petalled white flower in the centre, and the arms of the cross itself ending in stiffly-drawn yellow fleurs-de-lys.

Fyfield Church, Berks.—An archaic and conventional cross, with a flower of four petals in the centre, and the same number of pale brown fleurs-de-lys springing from that centre, between each equal arm of the cross, outlined in brown and stained yellow.

Kirby Malzard, Yorkshire.—A boldly-drawn five-petalled flower, with long and thin extending leaves standing out between each petal, the centre of flower being cross-hatched. (See illustration fig. IV., No. 2.)

Sutton Courtney, Berks.—A small yellow circle in the centre, with four sprays of dark brown leaves arranged cross-wise, and four batches of yellow berries outlined in black between each spray.

Luton, Bedfordshire.—The word Hola boldly written in yellow, outlined in dark red, with a kind of architectural trefoil placed in either angle of the quarry.

Fulbourne, Cambridgeshire.—Under a broad border on the two upper sides, of brown and yellow, two acorns and two oak leaves arranged in the form of a cross,—the acorns in brown, the leaves in yellow.

Headington, Oxfordshire. — A conventional yellow flower, of four petals, placed upon a larger conventional flower of a similar type, and the same colour, with four single leaves added in outline so as to represent a cross. . . . . A conventional lily, with two stiff leaves, one on each side, and with the letter M on a smaller diamond-shaped shield placed to the left; the leaves and letter being yellow, the lily white.

So much for the specimens described and illustrated up to the present point. In the second part of the paper, quarries of a later date, containing devices, rebuses, and heraldic illustrations, will come under consideration.*

* We are indebted for this to the late Rev. Dr. Wood, some time of Castle Morton, but afterwards of the diocese of Lincoln.

† One specimen of this quarry, we are told, is preserved in the Picture Gallery of Chequers Court, Bucks, near Kymble. During a visit there, seven years ago, we were unable to discover it.

‡ Messrs. Powell & Sons, of Whitefriars, possess a somewhat similar quarry.

* To be continued.

ARCHITECTURAL EDUCATION.

THE PRESIDENT'S ADDRESS, ARCHITECTURAL ASSOCIATION.

Mr. Charles R. Pink, A.R.I.B.A., President of the Architectural Association, delivered the following address at the opening meeting of the Association on Friday, the 23rd inst.,—

Our Association is essentially of a democratic character, all our members being on the same footing and enjoying the same privileges. At the same time, it is a society established for the promotion of the study of civil architecture, and the members are naturally formed into two divisions,—those who form the executive, and those who receive instruction. I believe it to be my duty, as President, to address the second class—the rank and file of the Association,—without whom we should practically lose our *raison d'être*. I mention this because of the presence of so many senior members of the profession, who might consider my remarks very trite and elementary, and who might expect that I should touch upon larger and more burning questions. The other point to which I would call attention is that in consequence of the prize-giving this evening it leaves less time at my disposal for the addresses, and for hearing our other friends. I have, therefore, condensed my remarks as much as possible.

It is fortunately no new thing to be able to congratulate the Architectural Association upon the close of a successful session, and to make a reasonable forecast of success for the coming one. This I feel I may certainly do on this occasion; and at the same time I would thank you once more for the honour you have done me in electing me to this chair, an honour I can assure you I value most highly, and shall always recollect with sincere pleasure. My best endeavours will be directed to the accomplishment of the work of the Association, so that I may be able, at the end of my term of office, to render a good account of my stewardship.

This session may be taken as marking an important epoch in our history. The reforms and amendments recommended by the sub-committee which so ably took the question of possible improvement in hand, have been sanctioned and adopted by you. We shall now have an opportunity of judging of their working. I believe the results will be most advantageous; but at the same time I may remind you that, with our present funds, it is impossible to fully realis the results which have been shadowed forth.

For what I have to say this evening I shall not be able to lay claim to originality. Mine will prove indeed, I fear, a twice-told tale, but the importance of its subject may justify repetition. I simply propose to review briefly some features and branches of our professional education, keeping especially in view the increased advantages now offered to the student by the Association.

And here, I may add that I shall view the duties of an architect in the broadest spirit. I cannot allow myself to regard him solely either as artist, "scientist," or man of business. It is no kindness to a student to advise him, as some do, to neglect during his pupilage important branches of an architect's work. An architectural student should endeavour to make himself, as far as may be, conversant with *everything* connected with building. He may hereafter be able to confine himself to some special class of work, but he will much more probably find himself started amid the troubles of a general practice, and then, I can assure him, no knowledge will come amiss. If, as a student, he should have posed himself as a specialist, he will find himself most likely, when in practice, elbowed out by the civil engineer, surveyor, "sanitarian," or decorator, as the case may be. There is nothing unworthy, notwithstanding suggestions to the contrary, in a student aiming at being in a position to live honourably by his art. Such an ambition is, indeed, right and praiseworthy, so long as "the last or farthest end of knowledge be not mistaken or misplaced." This being so, and in the face of ever-increasing numbers joining our ranks, I certainly do not wish to see the legitimate field of the architect's work narrowed one whit.

It is unfortunate, doubtless, that in the Association we should only be brought into contact with the student when he is already, for good or ill, pledged to the pursuit of architecture. We can have no voice in his initial selection. This duty falls primarily upon parents and guardians, and secondarily upon the architects who accept the charge of pupils. I would that the responsibility of advising a young man to follow our profession were more deeply felt. Undoubtedly, a decided bent and special capabilities are important to the making of an architect. Lord Bacon said,—

"In the culture and cure of the mind of man, two things are without our command; points of nature and points of fortune; for to the basis of the one, and the conditions of the other, our work is limited and tied."

These words should afford matter for profitable consideration to those who have to decide the future calling of any one, in whose well-being they are truly interested.

This much, however, I may urge (not but what it has often been urged before), that boys, as a rule, begin their professional education at too early an age. A good and liberal education, if possible, obtained at public school and university, is of as great importance to the future architect as to the members of other learned professions. Our technical education should, in my judgment, *follow* a good grounding in classics, mathematics, and the other studies which make up the necessary school-training and education of a gentleman. Mr. Ruskin has told us how important the study of the *humanities* should be to us; and, with regard to mathematics, we know "that they do remedy and cure many defects in the wit and faculties intellectual. For, if the wit be dull, they sharpen it; if too wandering, they fix it; if too inherent in the sense, they abstract it." Indeed, whilst a knowledge of the principles of mathematics and geometry is really indispensable to us in our practical work, its collateral use "is no less worthy than that which is principal and intended."

Although most strongly advising a student to devote himself, heart and soul, to the work of his profession, and to avoid distracting and desultory studies, I would at the same time warn him not to allow his knowledge to be entirely restricted by his practical needs. An architect is reasonably expected to be a man of general information, and to have a more or less intimate acquaintance with the various branches of science and art lying outside his own professional groove. Indeed, to know any subject thoroughly and intelligently, we ought to know a good deal about its border-lands.

So soon as a student is articled it is of the

utmost importance that he should begin serious work. He must not postpone taking advantage of the opportunities for study placed in his way. He must not let his first enthusiasm cool. That a student *should* possess enthusiasm, I conceive to be of the highest importance. An architect who has risen to well-deserved eminence told me, a short time since, that it was a source of the deepest regret to him to find that as he grew older his enthusiasm for his art became, he supposed necessarily, less ardent. He felt that without thorough enthusiasm no really first-rate work was possible. A pupil may at once dismiss the idea that, within the four walls of his principal's office, and during the prescribed hours, he can obtain the full knowledge required to fit him for the practice of his profession. I do not for one moment depreciate the value of a practical office training; on the contrary, I strongly feel its value. It does not, however, afford all, or nearly all, that is necessary for the student. The very existence of this Association proclaims this fact to you. And here, I would say, that I trust principals may take a more liberal view of their relations to pupils than has been sometimes the case. In the office, pupils should have opportunities of really seeing how a work is carried through, in every detail, from start to finish; they should have every chance given them of inspecting buildings in progress; and after having acquired the first elements of office-work, they should not have their time mainly filled up with the (to them) unprofitable labours of tracing and copying specifications. With regard to academical teaching, of course an architect in practice cannot be expected to give this; but he may reasonably be asked to afford facilities enabling his pupils to obtain it elsewhere. Within reason, and under proper regulations, a principal may well grant his pupils time to attend lectures and classes or for sketching and studying buildings. It is indeed his duty to give them every chance, so far as lies in his power, of acquiring a good knowledge of their profession during their pupilage. It should be remembered, too, that a student cannot be expected to do himself justice in his more advanced studies, if he can only devote to them the evenings of days spent in office-work.

I must, however, now return to the Association and its work. I will presume that a student will not long delay joining our society after having seriously commenced the study of architecture. As soon as possible after his election he will do well to consult our newly constituted Committee of Advice, so that he may be recommended what classes to join and what general course of study to pursue. A young student will, I think, find the recent division of the classes into two distinct divisions, Elementary and Advanced, very helpful to him. The aim of every member on joining us should be to pass through our whole *curriculum*. This, however, must be done by degrees, and it is assuredly better to do a little well than attempt too much at a time. A course of private reading, illustrative as far as possible of class-work, must not be neglected.

And now to turn to individual branches of our work here. First, we have design. This is the study of paramount importance, and you may depend upon it that whatever your natural powers may be, good design will only be the outcome of close application. Our classes, I feel sure, offer to the student of architectural design the best available help, supplementary to the study, sketching, and measurement of actual buildings. In selecting buildings for special study I would advise you as architects, and not merely antiquaries, to exercise a wise discrimination. Rest assured, some inferior designs were carried out in old times as well as now. Further, do not be ashamed to take a keen and intelligent interest in the buildings now rising around you; for in this direction lies the path of progress. Sooner or later you will find you must not, you cannot, neglect modern works, for they form, especially in their plan, construction, materials, and arrangement, the record of means discovered and adopted to satisfy the ever-increasing needs of our modern civilisation. You will also derive great benefit by forming a habit of observing the details of buildings, old and new, methodically, in some certain order of relation. The Institute published many years ago a pamphlet called "How to Observe." Its suggestions and information have become antiquated, but I think a similar work, adapted to the present time, would be useful.

With regard to the vexed question of styles, I will say nothing on this occasion, but only point out that the true artist seldom fails to give us good art, irrespective of what we call a style. One characteristic of all good buildings, architecturally speaking, is that their design is appropriate to their purpose. Mr. T. G. Jackson has recently enforced very ably this truth. If we carefully analysed the design of old houses, homesteads, and other every-day buildings which please us, we should soon discover that the good results are not obtained by redundance of "ornament" and general unrest, but by good materials, solid building, broad masses, and generally by common sense, perhaps "commonplaceness," in plan and elevation. I think it was the late F. P. Cockerell who said, "We architects have yet to learn the value of a *plain brick wall*." Do not introduce ornamental details simply for their own sake, but make them help the general design, and let them always show evidence of thought and refinement. One other point I would urge in passing, and that is, the value of giving "local colour" to your buildings; the distinctive peculiarities of material and design in our country districts should, if possible, be preserved. An attention to this will ensure a building harmonising with its surroundings, and possibly make it, instead of a disfigurement, an addition to the beauty of the country side. It is no insignificant matter in these days, when on all sides we see the towns spreading over the fair expanse of rural England, to endeavour to make the change less abrupt, less gloomy, less sad. Would that we, as architects, had the power to deal with the main evil, the deplorable work of those "field-rangers," the speculating builders.

In the internal decoration of houses and other buildings, undoubtedly a great advance has been made of late years. The architect now finds himself provided with a varied supply of beautiful and excellent materials, such as he could scarcely have dreamed of but a short time ago. I hope, therefore, our class for the study of colour decoration, provided as it is with such an admirable staff of visitors, may obtain a larger attendance than it has heretofore been able to secure.

And here I may supply what may seem an omission in my previous remarks, I mean a reference to the importance of being able to draw "in freehand" thoroughly well, with accuracy and facility. Good draughtsmanship is no substitute for good design, but its value to students can scarcely be over-rated, and, indeed, is so patent that I may be contented with a bare allusion to it. The Association does not profess to supply the teaching of an ordinary "Art School." This is the less to be regretted, inasmuch as opportunities for gaining skill in drawing from the flat, round, and living model have multiplied in London, and, indeed, all over the country. No architectural student must, therefore, neglect to acquire the grammar, as it were, of art expression.

Now, with reference to the scientific section of our work here, I would say, let your study of construction and materials go hand in hand with your efforts in design. When you have passed through the ordinary classes of construction and practice, do not neglect, as has been too much the fashion, the advanced class. It ought not to be necessary for you, when in practice, to call in a specialist to advise upon any ordinary problem in iron or other construction. If you obtain a general grasp of mechanical principles and their application, the intricacies of strains and stresses will no longer discourage you. It is, therefore, an excellent thing when a student before commencing work in an office can pass through such a course in the applied sciences as University College (London) provides. In these days you must also not fail to take a thorough and intelligent interest in the progress of sanitary science as it affects buildings, and make yourself familiar with its practical details. The issues depending upon the knowledge of what should be done in order to secure healthy homes are so momentous, that ignorance in this respect on the part of an architect would be indeed culpable.

Our members will find the class for the study of quantity-surveying and specification-writing a great help in practical work. Such a class cannot fail to teach, among other things, how many are the limitations in design brought about by the all-important question of cost, and also by trade-usages, the market forms of materials, &c. An architect may, probably, not have to practise as a quantity-surveyor, but he will never regret having studied the anatomy of a building in the light of quantity-taking. Such a course will give him a knowledge of the minutiæ of construction as nothing else can: and method, clearness, and ease will consequently be displayed in his specification-writing.

In passing, I would also just mention the class for the study of land-surveying and levelling, as affording students an opportunity of acquiring an art which they will often find useful hereafter. I have received strong testimony from members to the advantages they derived from attending this class.

I have not yet referred to the courses of lectures which have, during the last year or two, been given in connexion with the classes of design and construction. These lectures, I consider, mark a distinct advance in the Association's work, and I am convinced they greatly increase the benefit students derive from the classes. Our best thanks are due to the lecturers who have so ably helped us in this matter, and I only hope we may be able to find ways and means to establish lectureships in other subjects connected with our professional studies.

I have already alluded to the importance of private reading. Our library here exists for this end, and the reference and lending libraries of the Royal Institute of British Architects, as well as the National Art Library are available to the student. The list of students' books published by the Institute will be found useful in directing a course of reading; the new Brown Book also furnishes a list of books relating to design, and our Committee of Advice will give any information which a member may need respecting books for study. The elementary text-books are moderate in price, and a student should not fail to buy these for his own use. Speaking of books leads me to point out that a knowledge of one or more modern languages is of practical use to the architect, apart from the increased facilities it gives for travel. Many of the best treatises on our art are published in French and German, and they are sealed to us if we only know our native tongue.

I have now briefly referred to what I may characterise as the chief branches of the work of the Association. To their work here, our members add that of the office. We must, however, never forget that nothing done either here or there can take the place of the study of actual buildings. The student should never lose an opportunity of examining works in progress. We arrange fortnightly visits of interest during the Session, and I am very glad that we are now enabled to give members further advantages in this direction by granting general passes to various buildings under proper conditions. Professor Roger Smith's advice, to watch all buildings in progress which you may pass to and from your office, affords a good practical hint. When you are on a building I would urge you to make a sketch or written note, even of details, apparently it may be, very trivial. I believe when we commence practice we often find ourselves in want of accurate knowledge of small matters, which we have missed hundreds of opportunities of noting. In the specifications which pass through your hands do not allow any expression or reference to remain obscure; take the earliest opportunity of solving the point in the light afforded by an actual building. If you have the chance of visiting the builder's workshop do not neglect it; if you can arrange to work there for a time so much the better. Cultivate also the acquaintance of any workman who is master of his craft, and rest assured you will learn very much that is valuable by so doing. I remember arranging with a fellow-pupil on more than one occasion to spend a day on buildings in progress, in the company of a good builder's foreman. We were not afraid of asking questions, we noted down all the answers we obtained, and in this way derived very much practical information.

Before referring to other matters, let me once more earnestly beg, that in all our studies, our work shall be distinguished by system, solidity, and thoroughness. May we avoid that "method of imposture" which "delivers knowledge in such a manner as men may speedily come to a show of learning, who have it not."

It must be apparent that in giving details of the means at our disposal for architectural education, I have had mainly in view our students in London. Country members can, I am glad

to say, avail themselves of many of the advantages of the Association, but in the nature of the case, it is impossible for us to offer them quite equal educational privileges with residents in London. Where a country town can support its own local architectural society, however, more may be done to put the London and country students on a similar footing. The pupil of an architect in the country, nevertheless, often possesses some special advantages, such as extended opportunities of becoming acquainted with a very varied practice, and of studying old buildings and works in progress, not to speak of his closer contact with the beauty of nature. I may, perhaps, also add that the counter attractions to study are, as a rule, fewer in the country than in London. I have often thought that correspondence classes, having especial reference to preparation for the Architectural Examination, would prove a great boon to country students. I would suggest that they might be established much on the lines of the London University Correspondence Classes; examiners prescribing the course of reading, setting papers of questions, and correcting and annotating the answers. The History of Architecture, the Science of Building, Materials, Building Law, and Sanitary Science, at once suggest themselves, as affording good subjects for instruction by this means. I should be glad if some such scheme as this I have sketched, could be vigorously started.

More and more I look forward to the Architectural Examination established by the Institute being recognised as the test of our students' work, here and elsewhere. I trust, therefore, our members may, from the very first, be led to direct their studies with the full intention of passing this Examination, which, in my opinion, should receive the strongest support that can possibly be given to it. It was established, after long and unceasing efforts, by those who rightly considered it the most important step towards ensuring to the profession in the future its proper position and influence. I have had experience of the Examination, both as a candidate, and subsequently as a moderator, and I am convinced that it will be found only a fair test of necessary architectural knowledge. No doubt by degrees a higher standard will be set, but the present scope of the examination cannot be pronounced too wide, or too deep. With regard to the probationary work which has to be submitted, there is no reason why this should frighten the would-be candidate. The drawings required have not to be specially prepared, but are, indeed, such as a student, after a few years in the profession, is likely to have made for other purposes. This examination question is a very pressing one for the younger architects, and I cannot believe that one of our professional sheet-anchors will be allowed to fail in its intention for want of their hearty co-operation and support.

Speaking of the Examination leads one naturally to refer to the Institute itself. I think you will permit me to say this much, respecting the alterations now proposed in the Charter: that they will receive, especially such as shall secure to country members and the Associates generally, their proper voice and due influence in the management and work of the society, our hearty sympathy. I trust that without shock or revolution, the Royal Institute of British Architects will now be able to re-establish itself on a firmer, stronger, and wider basis, and so attract to its ranks all who are worthy to be named as architects. It is becoming more and more important to the profession that it should be represented by an influential corporate body; it is, therefore, of consequence that the Council should be loyally supported in its endeavours to reform the old Charter (by which it has heretofore been bound), and so to place the Institute in a position to meet the present needs and wishes of the profession at large.

The stronger we can make our representative society, the more abundantly I believe will architects feel, and show forth true *esprit de corps*. Real professional etiquette is only another reading of the Golden Rule, and we cannot observe it too scrupulously. Our association together for the promotion of common objects cannot fail, I believe, to make for the amenities in practice we must all desire. I may be allowed to repeat here a few sentences on this subject, spoken by one whom we all honoured and esteemed, and whose recent loss we deplore. I need scarcely add I refer to the late Professor Donaldson. He said, addressing the students at University College:—

"In seeking for employment, an architect must use the delicacy of a sensitive and refined mind; and utterly abhor and avoid any underhand unworthy means of success. He must not urge his pretensions, unless justified by the occasion, or authorised by any accidental circumstance; and his conduct must be noble, open, and generous. He must never attempt to supplant a professional brother, nor seek by foregoing a portion of his fair professional remuneration to underbid him. He must never volunteer an opinion to the disparagement of another architect."

Professor Donaldson, indeed, represented the architect's ideal, as defined by Prof. Cockerell, being truly "an artist among gentlemen, a gentleman among artists." His constant efforts for the good and advancement of his profession, his work at the Institute, and, above all, the active interest he took in architectural education, can never be forgotten by us.

And now I must endeavour to bring my remarks to a close. I fear I have been too discursive, but, indeed, my subject is wide and many-sided. Even now I have merely touched the fringe of many matters of great interest to us as architectural students, and several points of importance I have been obliged to overlook altogether. In the few remaining words I have to say, I would fain "point the moral" of my address, and beyond all details, fix your attention distinctly upon the pressing need of the time.

It behoves us, then, as Mr. Cole A. Adams (to whose admirable conduct of affairs during the past two years we owe so much) urged from this chair, to look to our professional training, and see that it advances *pari passu* with the general advance of education and knowledge throughout the country. We have not, unfortunately, at present, the academical advantages our brethren in art enjoy in France and Germany; but we have some practical advantages they lack, and any deficiency only renders it the more incumbent upon us to avail ourselves of all the means of study we possess, at the same time endeavouring to extend them and make them more effective. Depend upon it, we must work with a will, and be afraid neither of new methods nor new studies, if we are to hold our own in the profession against an invasion of specialists; do our duty to our clients; and obtain the confidence and esteem of the people at large. In this scientific age it will do no good for a student of architecture to proclaim, as some would have him do, that he, as an artist, has nothing to do with the dry bones of science. Rest assured, such a one must sink into the position of a decorator or mere *dilletante*. First and foremost, by all means let us be artists, and thorough ones too, but if we fail to study also the science of building, there will be no place for us among that throng of great architects,—great constructors,—to whom we rightly look back with pride and admiration. They always strove, in all things, to be in the very fore-front of their age; and if we do not follow their bright example, the very art of architecture,—the mother of all the arts,—will have "but a name to live and be dead."

But, fortunately, it is in our power, and I feel sure that it is our set purpose, to prevent any such result as this. If we, in the strong bonds of union, now earnestly work in the cause of architectural education, we may look forward to the future with confidence, believing that our art will still produce works to vie with those noble buildings, which raised aforetime, are counted among the very chief and most enduring glories of our country.

[For a report of the discussion which ensued, see p. 622.]

The Late Mr. Ordish.—At a meeting of members of the Leicester Society of Architects, recently held, the following resolution was adopted:—"The members of the Leicester Society of Architects, deeply lamenting the sad death of their old friend, Mr. Frederick Webster Ordish, remembering him as a genial companion, an accomplished artist, a bold and original thinker, desire to record their sense of the loss the profession and the society have sustained, and to express their heartfelt sympathy with his widow and the family."

Royal Institute of British Architects. The first ordinary meeting of the Session 1885–86 will be held on Monday evening next, when Mr. Ewan Christian, the President, will deliver the opening address of the session.

THE PAST, PRESENT, AND FUTURE OF THE ARCHITECTURAL PROFESSION.*

One of the great architects of our own time, in his powerful and unique address as President of the Royal Institute of British Architects, studiously avoided the use of the word "profession," and he urged to me in private that architecture is an art, not a profession. On the other hand, a man who knows the world better than the late Mr. Street did, has publicly advised an architect if he wished to make good buildings to dismiss all grand ideas of the sort from his mind, and "whatever you do," said Sir Edmund Beckett, "don't call yourself an artist." We are artists, he maintained, in respect of our drawings, but not in respect of the buildings erected from them, and, said he, "experience has long enough shown that there is no connexion between the power of making nice architectural pictures and the power of producing fine buildings." Between the two extremes I am induced to think that the lawyer is nearer the truth than the artist, as he wished to be called. What Bacon wrote of medicine in his time, in the "Advancement of Learning," may, perhaps, be applied to architecture in ours, as "a science which hath been more professed than laboured, and yet more laboured than advanced, the labour having been rather in circle than in progression." In the same memoir the arts intellectual were defined by him as four in number, and I think that architecture belongs to each. Surely it is an art of inquiry or invention; of examination or judgment; of custody or memory; of elocution or tradition. Surely, also, it is admitted that there does exist, and rightly exist, a profession of architecture. I nevertheless feel certain that in the past the greater number of the architects of all countries were neither artists nor professional men as we in England now understand the terms, and they were not, so to speak, professionally educated.

I.—The Past.

Taking the roll of great modern architects, I do not find that their studies were limited to what we now call architecture. With a few exceptions they were men who began practice with a foundation of general learning, and who had travelled much and far. Michelangelo, and, in a minor degree, Bernini, combined the three arts; Vignola, who was a painter, Delorme, and Palladio, measured, studied, and put on paper an immense number of ancient buildings during long years, beginning at a very early age, and the three were great travellers before they attempted the execution of any edifice. Pierre Lescot was a priest, and Perrault a physician. Inigo Jones was a citizen of the world who had seen courts and distant countries, and he painted a little. Wren possessed vast scientific erudition before he began even the study of architecture. Sir William Chambers was similarly, though in a less degree, a man of general information. According to Quatremère de Quincy, the three works of architecture which the French esteem most, due to men who had not made that their special profession, are the old Louvre by P. Lescot, its great colonnade by Perrault, and the arch of St. Denis by François Blondel, who began the practice of architecture at the age of forty-seven, after he had been employed on diplomatic missions, had taught mathematics, and had been the dauphin's tutor. J. H. Mansart, the nephew of *the* Mansart, was perhaps more like an architect of our own time than any of the remaining eleven. The architects in the sixteenth, seventeenth, and eighteenth centuries were undoubtedly the acknowledged masters of arts. Painters and sculptors assisted them, but as subordinates, and the works entrusted to these masters were necessarily royal palaces, cathedrals, great churches, and buildings of a national character. The larger number of persons who, at the present time, support the professional architect did not then employ so exalted a personage. Their work, when they required any, was done by the mason, carpenter, and smith: the master-workman of their time, and indeed of ours too among the older nations and in several parts of Europe.

The pre-eminence of architecture was recognised in the charter granted by Louis XIV. to the Academy of Painting and Sculpture in 1717,—a pre-eminence which was taken away sixty

* A paper read before the Leeds and Yorkshire Architectural Society, by Mr. William H. White, Secretary of the R.I.B.A., on October 26, 1885.

years afterwards by another charter received from Louis XVI., the first clause of which assimilated in so many words painting and sculpture with literature, science, and the other liberal arts, especially architecture. A few years previously, in 1768, in an "Instrument" conferred by George III. on his Royal Academy of Arts, the position of intellectual superiority given to architecture is apparent, but not clearly defined. The order of precedence is not invariably painting, sculpture, and architecture. By clause VIII. the office of treasurer, only second to that of president, was given to an architect; under clause XI. a professor of architecture was ordered to read annually six public lectures "calculated to form the taste of the students [of architecture, painting, and sculpture], to instruct them in the laws and principles of composition, to point out to them the beauties or faults of celebrated productions, to fit them for an unprejudiced study of books, and for a critical examination of structures"; and his appointment under the "Instrument" preceded that of the professor of painting and the professor of perspective and geometry. By clause XX. there was to be a library of "books of architecture, sculpture, painting, and all the sciences relating thereto." * Our Royal Academy was established, to use the exact words, "for promoting the arts of Design," that word possessing a signification much more nearly allied to *dessein*, or drawing, than to "design" as it is understood by the modern architect. On the other side of the Channel at that period the Academy of Painting and Sculpture, founded 1648, was firmly established, and the Academy of Architecture, founded 1671, was still in so flourishing a condition as to consist of sixty members, with about an equal number of students. But though much was already done in the matter of art for our French colleagues, they were not represented as a profession until 1840-43, when the Société Centrale des Architectes was founded in Paris, principally with the object of instituting a diploma.

Fifty years ago the architects of this country, some of whom already belonged to a professional body called the Architectural Society, were invited to meet for the purpose of forming an institution responsible (1) to the public for opinions on points through whose observance the national character for taste might be directed and maintained; (2) to individuals in cases whereon recourse might be had to its opinion; and (3) to the body of the profession for a determination to uphold by conjoint exertion a high character and respectability amongst its members. With a view, then, to the promotion of such important objects the Institute of British Architects was founded in 1834, and incorporated three years afterwards by royal charter.

That I should deem the profession of architecture in this country to be indissolubly connected with the Institute of Architects is obvious, and I think the belief is shared by a great many persons less personally interested in that article of faith than myself. The late Professor Donaldson has left, in a speech delivered at a meeting of the Institute just fifteen years ago, a personal note of the founders' motives, and given a reason for the comparatively limited number of its members. I recollect the profession," said he, "before many here, —for about half a century [*i.e.*, since 1820]. At that time there was a very intimate connexion between architects and builders. . . . . It was determined by some young and ardent spirits that a severance of such connexion should take place to remove that scandal. That was the foundation of the Institute: to establish a body of members purely architects, and not mixed up with builders. It is not that we disregard the builders. They are, for the most part honourable, intelligent, and high-minded men, but their duties are distinct from ours, and our professional reputation might suffer by any intimate connexion with them. . . . . That is the reason why there is such a great difference in point of numbers between this Institute and that of the Civil Engineers, for the engineers have no such restriction. They admit contractors as members, also persons engaged in several trades in connexion with engineering, whereas if we admitted builders, paperhangers, plasterers, and decorators, — men whom we respect in their several stations because very much depends upon them in the execution of our works,—we should have an Institute as numerous as that of the Engineers." It will be seen by a careful perusal of the first address of the Institute, printed in the new Kalendar just issued to members, that not only the provisions of the charter under which we are now governed, but also the professional obligations which bind both Fellows and Associates, were formulated and agreed to as early as the year 1834, three years prior to the grant of the existing charter.

About the same period a Fellow of the Institute, the late Mr. James Noble, published a little book on the professional practice of architects and of measuring-surveyors, &c., a somewhat involved and rambling piece of composition which, oddly enough, is the only work of the kind yet offered to the public. According to him there were barely twenty-five architects in the United Kingdom at the commencement of the last century, and it was not until the time of the great Lord Burlington that the employment of architects began to be systematised. It was then that a commission of five per cent. became the established compensation for duties and services of every nature, from the making and finishing the first sketch of a design to the complete execution of the work, the final arrangement and settlement of the cost, and the certifying and signing the various accounts. The system which still obtains in Paris and throughout France was the English system during the latter half of the last century. Works were paid for by measurement according to a certain tariff of charges, and the architect employed to design and erect an ordinary building had to treat with a dozen or more master-artificers, often unknown to each other, innocent of any sort of mutual organisation, and unwilling to accept instructions from any one but their master the architect. It was he who ascertained the quantities and data for the various materials and labour, and he who determined the value of the same. Hence it was usual for a master-artificer to employ a measurer whom he paid as his assistant—as he still does in France,—to check the measurements made by the architect, and the latter's assistants. It was the State that introduced the general contractor. The Government of this country about the beginning of the present century was the first to supersede the groups of master-artificers, who technically understood their respective trades, by a capitalist who accepted the responsibility of the several tradesmen without possessing in himself any technical education whatever, or indeed any capacity for the building arts. Such action not only ultimately ruined the master-artificers, but it also struck a heavy blow at the architectural profession, and the seed then sown has produced the British workman of to-day,—a fact which has been already noted, I think, by Mr. Herbert Spencer. At the same time the labour of an architect was lessened, and his employer was rendered able to judge in advance, and with comparative accuracy, of the amount he would be likely to expend upon a new building. With the creation of a class of so-called builders there arose a new profession. The measurers, who were originally the journeymen-assistants of the artificer, who was a master of his craft, became the indispensable advisers of the capitalist-master, who understood no trade except that of making money. The measurers developed into an important body of well-educated men, and have become the business advisers of architects as well as of capitalist builders.

The clerk of the works also became, under the general contract system, a personage. But though raised from an assistant to be a superintendent,—though his duties, powers, and responsibilities were largely increased,—he was, and still is, chosen from a subordinate class of artificer. Recently a special vocation has been constituted of these technical officers, who in this country do work which among the French is entrusted to trained architects and to young men who are training for the profession. The clerk of the works, as he is known in England, is extremely rare among our neighbours, and how detrimental he often is to the proper execution of the work, especially in the choice and reception of materials, I leave actual practitioners to say, for it is now time to consider the more recent relations of the Institute with the profession.

One course of action, for which it made itself responsible, was taken without a tittle of authority. There is nothing in the Institute charter, and there never has been any by-law made under it, which treats of the remuneration of practitioners. At a period anterior to the foundation of the Institute, a scale of charges or terms for business transacted was sometimes drawn up by individuals who made that scale a basis of agreement with their employers, and a notable example is extant of Joseph Bonomi's terms, dated January, 1794. A Schedule of Charges was formulated by the Institute in 1862, and confirmed at a general conference of practitioners. But subsequently the unhappy word "rules" was prefixed to that excellent document, in its modified form of ten years later. Utterances were made concerning the duty of every member, irrespective of age, class, or experience, to charge his clients not less than five per cent. commission on executed works, and thereby adhere strictly to the terms of the orthodox schedule of "rules." The inevitable accusation of genteel trade-unionism might have been answered by a direct negative, had not the corporate powers been exceeded, for the slightest acquaintance with the by-laws suffices to show that membership of the Institute, whether as Fellows or Associates, involves no obligations upon them other than those of honourable dealing in matters of business entrusted to their charge, and in the interest more even of their employers than of themselves. Another misconception which has done harm was traced, after much inquiry, to an address delivered by Mr. Waterhouse in 1878, as President of the Manchester Society, and repeated in various places, notably at Leeds. He told his audience that members of the Institute were forbidden to act in the capacity of quantity surveyors,—unwisely, he thought, because no employment could be more remunerative or instructive to the young architect than to take off the quantities of the designs of elder men. But he was entirely mistaken, for no such restriction has ever existed as far as the young members are concerned, namely, the Associates, who are nearly 700 in number. They have always been permitted to act as quantity surveyors, while a Fellow is only prevented from taking off quantities for works which are not executed under his own superintendence.

II.—The Present.

It may not perhaps be altogether idle to speculate upon what might have happened had the founders of the Institute of Architects so drawn their charter as to admit to the rights and privileges of corporate membership the general contractor and the large manufacturer of building materials. Without doubt we should have been richer, and we should have had a larger Benevolent Fund, probably in extensive request among the more artistic members, but there would have been few, if any, purely professional architects at the present time. The prominent members would have been contractors with seats possibly in the House of Commons, and, as a consolation, they would have possessed a better knowledge of the art and science of architecture than the majority of the successful contractors enjoy to-day. But I doubt whether the great European architects, the *confrérie* of Berlin, Paris, and Vienna, of Italy and Russia, would have cared to hold our diploma of Corresponding Member, or to acknowledge Fellows of the Institute as brethren and colleagues. Many of us, on that account alone, will render tribute to the wisdom of our founders, and to none more heartily than to him who, remarkable for general attainments and a high degree of learning, and respected both at home and abroad, ended a long life of honourable exertion in August last. His mission, however, had been to some extent accomplished. The world is completely changed in character since Donaldson was in his prime. At the beginning of this century the latest foreign news upon scientific, archæological, or artistic questions was sought at the Royal Society and the Society of Antiquaries. In 1840, men learned at the Institute of Architects what new buildings were in contemplation, what methods of design or construction were most in vogue in Paris or Vienna, and the drawings of such Continental novelties were sometimes first exhibited in our rooms. But a professional press does all

* The Queen, like her great predecessor who was prepared to unfrock a bishop, can undo at a stroke the work of her royal grandfather, and do no wrong. Hence British architects can only bow to circumstances whereby many of the provisions relating to architecture in the original institution of the Academy have been for years ignored. But it is not too much to add that, if the high distinction and honourable privileges conferred by that charter upon the architect have been recently sacrificed, the loss is due in a great measure to the apathy and indolence of those who, since the death of Street, have been the chief representatives of the profession at the Royal Academy.—W. H. W.

that now, and, considering how expeditiously it is done, does it marvellously well. Indeed, an interchange of professional periodicals has results far greater than any "foreign correspondence" between societies can produce. Another object of the founders was to form a museum of antiquities, models, casts, specimens of materials which tend to illustrate the arts and sciences in their application to design and construction, and to report on new inventions. But the State has lately done this at South Kensington, and previously at the British Museum, in an unrivalled manner, while exhibitions of materials, periodical and permanent, abound not only in London, but in all parts of the country. On the other hand, the formation of an architectural library has probably been attended with more success than many of the originators in the year 1836 dared to expect.

It is quite different as regards the practice or business of the profession, the control of which, successfully attempted in the early years of the Institute, has been allowed almost to lapse. Take a deplorable instance, indirectly referred to by two Presidents in succession, that of the conduct of the Metropolitan Board of Works. The principal business of that Board is transacted by the Works and Purposes Committee, which is a committee of the whole Board. The present chairman of it, Mr. F. H. Fowler, who is a Fellow of the Institute, was employed to design and superintend the erection of the so-called "National" Opera-house on the Victoria Embankment, and also the new theatre in Northumberland-avenue. Another member, Mr. J. E. Saunders, also a Fellow of the Institute, has been employed, in open partnership with architects (not members of the Board) in the design and erection of the new Grand Hotel and the new Hôtel Métropole, situated at each extremity of Northumberland-avenue; and also in partnership with another architect (not a member of the Board) in the design and erection of the new London Pavilion Music-hall. All these buildings are situated on land which is under the charge and, so to speak, jurisdiction of the Board. The land is let by the committee of which these architects are members. The partnership of a member of the Board with outsiders, who are virtually customers of the Board, is admitted both in Spring-gardens and at St. Stephen's. I cannot for a moment doubt but that everything done by these gentlemen in business so conducted is perfectly straightforward and correct. But the principle of the thing is wrong, and no integrity, however miraculous, can make the practice right. Referring to this subject, the late Mr. Street, on November 7th, 1881, said:—"I do not think it right to close the few words I have to say on the Northumberland-avenue question without endorsing what fell from my predecessor in this chair on the subject of architects who are members of the Metropolitan Board. 'Architects,' he said, 'may be elected members of that Board, just as barristers, solicitors, and doctors may be so elected. It would be ridiculous to say that professional men shall not sit at that Board because they may have had a pecuniary interest in some of its building transactions. But I shall run no risk of censure when I say that a Fellow or an Associate of this Institute, if he be elected a member of the Metropolitan Board of Works, ought not, from that moment, to have any professional connexion whatever with the purchase of land offered for sale or lease by the Board; nor should he be professionally engaged in the superintendence of buildings to be erected on land which is the property of ratepayers whose agent and representative he is.' Such a statement is so obviously right and beyond question," continued Mr. Street, "that I am sorry it should be necessary to repeat it." That was said in 1881, and now, four years afterwards, it would have been still necessary, had he lived, to repeat a similar admonition.

Indeed, it is now ten times more urgent to direct public attention to the matter. An extended representation of the people has been sanctioned by Parliament. It is probable that a few practising architects may, in course of time, obtain seats in the House of Commons. Are they to carry on and promote their business in the House itself? Are they to use their honorary position as legislators to obtain professional work for themselves? If so, I think that such licence will be injurious to the public interests, and that such Members of Parliament should be regarded by the profession as the common enemies of all. It was this very thing to which Prévost-Paradol alluded when, in one of his admirable articles on the English constitutional system, he expressed a fear that its decline would be accelerated by private Bill legislation and the personal interests of legislators. For my part, I think that this country has strength and vitality enough to survive the sins of its rulers, as recent events show, but the British Empire will be very far on the road to ruin when a Cabinet sitting in Downing-street is composed of a dozen tradesmen who use the various embassies of the world as trade agencies for the sale of their wares,—a logical deduction, surely, of the system which two Presidents of the Institute of Architects have publicly reproved.

The principle, however, on which the Metropolitan Board of Works acts in regard to the profession of architects is the right one. The Board does not attempt to build on the sides of the new streets which it makes, nor does it allow the Superintending Architect to monopolise any such work, or even to practise on his own account. The land is apportioned in lots, and let to individuals who employ architects and others to erect buildings for them, the Board merely requiring the drawings of the same to be submitted for approval before the buildings are executed. True, the person who wishes to build does not always succeed in obtaining his land direct from the Board. Large premiums have to be paid on the sums paid by the original purchasers, notably, in the case of the "National" Opera-house and other important buildings; but such instances are commercial and often accidental in their nature, —not absolutely detrimental to the principle of freedom involved,—and, therefore, what municipal government the metropolis may be said to possess does not exclude, or compete with, or, perhaps I may say, "boycott" the profession of architects, as the State has done for a good many years.

The system under which the State erects public buildings is not only discouraging to the profession, but it is singularly fatal to the creation of a national school of architecture. Observe what happens when a public office, say, is required at Manchester, or Leeds, or elsewhere. The drawings are made in London, the quantities are taken off in London, and a clerk of the works is sent from London to take charge of it as the building rises. From that moment until it is handed over to the proper authorities, the architects of the actual locality, their assistants, their pupils, and the public generally, regard the whole matter as alien to themselves, of no local interest, and national only because the nation has to pay for it. A public building of the kind which requires two or three years,—or even a year,—to erect, ought, on the contrary, to afford an example to the elder members, and a school to the youth of the profession. The State, advised as it should be, by the highest architectural talent the country can produce, might, sometimes with advantage, associate with such a building one of the architects of the locality; and its representative from London in charge of the works,—obviously better than an ordinary clerk of the works,—should attract to his office on the works, where many drawings would necessarily be made, some of the younger professional men, who would personally benefit,—to say nothing of other local fruits,—by contact with the Government servants. But the State invades the provincial cities of England as an enemy or a foreign competitor; it takes possession of land, fortifies it, and leaves the work it has erected to testify for a generation to its selfishness and ill-will. Even were the State to command the services of genius, such a course as it now pursues in regard to provincial public buildings would be inimical to local interests,—except, of course, in the fact of the transcendent excellence of its work. But, may I ask, is the work done by the State in Manchester or Leeds better than municipal and private work? As for London, what Philibert Delorme said 300 years ago of his masters applies with equal force to ours of to-day. While in Berlin, Vienna, and even Paris the few advise respecting public buildings and the many execute, in the capital of the British Empire "la charrette conduit les bœufs,"—the mob initiate and suggest. The story of the concentration by the State since 1839 of its public offices is so good that it bears constant repetition,—a ludicrous tale of fruitless effort and wasted opportunity during forty-six years, and even now only begun.

There is, unfortunately, no recognised authority to which the British public can appeal when, as the majority of men may fairly do, they distrust their own judgment in such matters. There is no standard of taste in this country, not even a bad one! Opinions upon architecture are confused rather than divided, and any attempt to get at principles breeds despair. In France, the academical "Forty," always kept up to the strength of fourteen painters, eight sculptors, eight architects, four engravers, and six musical composers, form a tribunal of experts. The Paris School, or, more properly, University, of the Fine Arts is one of the great institutions of the world, containing a school of architecture, the traditions of which, in France, Rome, and Athens, may be traced back through two centuries. But in England it has always been the fashion to decry such things. Our Royal Academy is primarily a fashionable market for the exhibition and sale of pictures, and its architectural class, which works six hours a week (in the evenings) during only a portion of the year, merely turns out draughtsmen. At the same time the Royal Institute of Architects, though it has established examinations in London and the provinces, though it possesses valuable studentships, and offers prizes which are much competed for, does not command adequate support.

The difficult question of professional education is the most perplexing one of the present time, for it is astonishing how much secret and indirect opposition exists to the establishment of any thorough system, and how many highly-respectable practitioners regard even the examination for membership of the Institute as an error or a misfortune. This neglect and indifference, it seems to me, is but a poor compliment to those who employ architects and hope to get well served, and, indeed, as always happens, the public are even with us on that score. You, Mr. President and gentlemen, will remember the unpleasant couplet,—

> "If of dull parts the stripling you suspect,
> A herald make him, or an architect."

Persons who have never heard of Martial nor read Addison accept this advice, for I have known it adopted on three occasions since I was first elected Secretary of the Institute: twice with and once outside its walls. One gentleman, having a son of weak mind, gravely consulted me as to the advisability of making him an architect; another, similarly favoured, brought his unhappy progeny for me to look at! The public impression that an architect works with his fingers,—that, in fact, he is a draughtsman or decorator,—is fatally prevalent. Even men who have opportunities of learning better fancy that a stay of three years in a practitioner's office suffices to make an architect, and young men are sometimes entrusted with responsible works by their relations after having served that term of indentureship. Who does not know by heart the anecdote which possibly applies less to Little Peddlington than to the capital of Barsetshire, or even Oxbridge and Camford? How a young gentleman from the country was articled at some cost to a London architect for three years; how at the end of the term he set up in practice in his native town, where, having good connexions, he obtained work at once, and took a pupil with a premium to help him do it; how at the end of the orthodox three years the ungrateful pupil took a room on the opposite side of the street, set up on his own account, and brought over with him his master's best client; how for the remainder of that master's professional life he never sought another pupil, but got his tracings made by errand boys, and his specifications copied at the stationer's. The story is not opposed to evidence. It is certain that among other vocations and professions the public are less facile and less venturesome than they are with us. On the other hand, and in an opposite extreme, the French architects complain that while they are spending their years of probation at home and abroad, at Rome, Athens, and elsewhere, the errand boys in the Paris offices are learning the business of the profession, and starting as architects on their own account, a complaint not altogether unfounded, but immensely exaggerated.

I am, however, sanguine enough to think that the recent proposals to apply to the Queen for a new charter, in which powers will be given to the Institute to develop its examinations and further professional education, will be productive of important results. The extension of voting powers to the Associates will also tend

to make the decisions of the body of British architects more representative, and these, properly directed, may contribute to the foundation and formation of a healthy public opinion upon matters in which the profession is vitally interested. At the present moment a memorial addressed to the Government is easily described by opponents as the outcome of divided opinion among some 400 Fellows in a Society numbering 1,300 members. But when the whole body of subscribing members enjoys the right of giving practical expression to opinion upon matters of professional education, State and municipal works and improvements connected with the architecture of the country, as well as upon such matters as the election of an annual Council, and the expenditure of corporate funds, the Institute will surely speak with a less uncertain voice than it has done for many years. At the same time, members resident at a distance must submit to the inconveniences, even in these rapid days, of time and space; for, after all, the primary object each has in view when he pays his annual contribution is the maintenance and advancement of architecture as a profession, as well as an art and a science. Power to vote in the election of the representative Council could not be extended to members in India, in the Australian Colonies, or in Canada, though any resident in any part of Europe might easily assist in such election. Personally, I believe that the election of the Council by voting-papers, issued to all members in the United Kingdom and Europe generally, is quite feasible, and a mere matter of secretarial routine. But I see difficulties in any attempt to settle through the post questions of professional practice or of other matters which require discussion, and the decision upon which is influenced by argument. In such cases I think that too much stress is often laid upon the value of a personal vote. It would be far more useful, and carry more weight, if the opinion of the various societies of British Architects, not only at home but also abroad, could be obtained previously to passing in London any important and decisive measure affecting the whole profession. For instance, under the proposed new charter, powers are asked to enable the Institute to grant a diploma, which has been the dream of architects everywhere. If these powers be obtained, the method to be adopted in instituting and making such a grant will require careful discussion, and by members of the whole profession. It is impossible to hope that every member of the Glasgow, the Manchester, and the Leeds and Yorkshire Societies will make a journey to London for the purpose. But why should not each society discuss the matter in its own head-quarters, pass a resolution thereon, and forward the same to London? Other non-metropolitan bodies of architects might do likewise, and those in the colonies might, on such a subject, contribute valuable information and advice. The uses and powers of local societies have never, in my opinion, been properly developed, and I feel assured that a body like the Leeds and Yorkshire Society, which, like that of Glasgow, is now registered under the Companies Act, and thereby incorporated, may do an infinite amount of good by regular communication of the kind with the central body. Again, the present degrading mode of remunerating architects is a subject on which the corporate action, not only of British societies, but of the whole world, might be sought. The mode of payment by commission is regarded in France, as well as England, with disfavour, and an international conference, if it were held in London, might be preceded by an invitation to the societies of Europe, America, and the Australian colonies to call meetings on the subject and express, as corporate bodies, their respective opinions on this difficult subject.

Furthermore, I think that the non-metropolitan societies and also the Architectural Association of London may advance the cause of professional education by instituting a preliminary examination for students on the lines of the Examination in Architecture. If in each of the great provincial centres a small library were formed, containing the books selected and recommended for reference, the studies of young men desiring to enter themselves for examination would be facilitated; and possibly the classes for students already existing might be enlarged so as to embrace the various sections of the Institute programme. Perhaps, in offering these remarks I may be suspected of aiming only at the aggrandisement of the Institute, but I take it that a non-metropolitan society would also increase in numbers and importance were it to enlarge its present sphere of usefulness and establish a scheme of education for students, followed by an examination which would be preliminary to the higher professional test for membership of the metropolitan body.

III.—The Future.

The future is perhaps an easier thing to treat, and likely to be more happily treated, by men when they are in their twenties than in their forties; and were I to accept what wisdom and experience in the seventies are sometimes good enough to tell me, the future course of the architectural profession will not be bright, successful, or enduring; but when these Nestors cherish memories of the past which often blind their mental vision. For my part, I cannot yet persuade myself that any "good old times" ever existed at any period of our national existence. I think that our professional future will be shaped very much in accordance with the manner in which the architects of to-day treat such vital subjects as the existing divorce of architecture from the general public, and of the profession from the State; such as the pecuniary interest of practitioners in trade contracts and in trading companies; and such as the education of students.

The present want of sympathy between us and the community at large may be rudely met by the ultimate dispersement of the majority of independent architects, and the rise of an advising class of professional men,—a class bearing the same relation to the draughtsman and the general contractor as the physician bears to the surgeon and the general practitioner of medicine,—a class in communication with, or, perhaps, to be more exact, in touch with the world in general. That touch was, to some extent, maintained, during the early years of the Institute, by the existence of a non-professional President, who, in all important matters, acted as an intermediary, and to whose tact and influence under many trying circumstances the early successes were largely due. Since the death of Earl de Grey the Institute has enveloped itself closely in the mantle of professionalism. In the wise determination to exclude the trade element from the corporate body it has fatally ignored a large number of learned men, amateurs and connoisseurs of the arts, even professional painters and sculptors, and also literary men, who, had they been given the rights and privileges of corporate membership, might have increased our strength and assisted the work of progress without any likelihood of the charge of dilettantism being flung at the Institute. At the same time they would have acted as the scouts of architecture in its advance towards public appreciation. There is still an opportunity of redeeming this error, as I venture to call it, by giving the Honorary Associates the same rights and privileges as are to be granted under the proposed charter to Associates. As for the State, it year by year becomes more commercial in its views, and its test of success in government is the amount of pecuniary profit it can make or save. The gulf now yawning between the State and the profession will probably be closed by some Curtius of a First Commissioner, who has pluck enough to make the leap, and the improved education of architects may go far to encourage and possibly justify a sacrifice of the kind. Macaulay, writing in 1830, and referring to the "fame of public works," argued the matter in his characteristic fashion. "In a corrupt age," he said, "there will be a direct embezzlement. In the purest age there will be an abundance of jobbing. . . . In a bad age it is the fate of the public to be robbed outright. In a good age it is merely to have the dearest and the worst of everything." It may be considered certain that the State will do a great deal more harm to architecture before it will be induced to retrieve its crucial error; but that matter may be left to work its own cure, if only the architects are true to themselves.

A tendency which now prevails to revert to the condition of things existing prior to the foundation of the Institute is not to be so easily overcome. The architect-traders may increase in numbers, because undoubtedly architecture as a trade is for the nonce more profitable than architecture as a profession. Many draughtsmen of talent who begin life as "architects" become "art-tradesmen," and execute work as well as design it. Ultimately it may become common for the general contractor to keep a staff able to design all sorts of buildings and to do it well, and this absorption of professional men may be accelerated by the architect-traders, placed, as they are to-day, in competition with the capitalist-contractor, who employs skilled labour,—a competition in which in the long run capital is likely to win. But I cannot suppose that the example set by a few professional men, who at the present day are excluded from the Institute of Architects on account of their connexion with trade, and their pecuniary interests in building materials, will be followed by those who reflect that, though a few may thus succeed, numbers in an attempt to imitate them must perish. To remove the present restrictions which prevent such persons from joining the Institute would imply that the founders were wrong, and had no cause for the suspicions they then entertained and the statements they afterwards made. Rather than do so, I, personally, would prefer to see the Institute closed at once, and our funds handed over to the Royal Academy, with a request that it will open an efficient school of architecture.

With regard to education, I believe it to be admitted by a large number of members that the Institute during its fifty years' existence has not done all that its charter allowed, and, indeed, invited it to do in promoting the study of civil architecture. Meeting after meeting has been held to discuss modes of electing the Council, and other half personal matters, which have been aptly described by an accomplished writer and speaker as "the inconsiderable commonplace of daily maintenance, the narrow things of the house." But battles upon the subject of professional education have been rare, and, indeed, it has been hardly thought worthy of a fight. There should, however, be no more hesitation. There has been enough of reflection, too little determination,—

> "In the moment of our talking envious time has pass'd away;
> Seize the present, trust the morrow, e'en as little as to-day."

A closer alliance than has hitherto existed between the non-metropolitan societies and the Institute, and between it and the junior body of British architects in London, may yet accomplish great ends. With an extended charter, granted on the unanimous prayer of the corporate body, the means of advancing the profession both in quality and status will be secured; and this happily effected, the watchword of all who have its interests at heart should be, I humbly think, Education! and again Education! and for a long time only Education!

Illustrations.

DESIGN FOR STAINED GLASS, BY E. BURNE JONES, A.R.A.

THIS is a reproduction from Mr. Burne Jones's cartoon for a three-light window for New Ferry Church, near Birkenhead. The titles of the subjects are given on the plate.

PARK.

THIS house, once of considerable importance, was built by the Earl of Leicester for a hunting lodge, Elizabeth having conferred upon him the old Welsh lordships of Arwystley and Cyfeiliog, of which the surrounding country formed a portion. His tenure seems to have been of a rather uncertain character, and, after his death, considerable litigation ensued. A rent-charge in favour of University College, Oxford, had been created upon this portion of his estate and the litigants settled their differences by giving up the property entirely to the College, in whose hands it still remains.

The house is completely modernised externally and very much cut about and altered inside. The hall, at one time utilised as a kitchen, has been partitioned off with the panelling taken from the large withdrawing-room, of which the handsome mantelpiece and one panelled side alone remain. One other room still keeps its panelling, richly moulded from floor to ceiling and with heavy cornice, while the stairs are tolerably perfect. Upstairs the greater portion of a very elaborately-carved mantelshelf remains in one of the bedrooms. The house is now a farmhouse.

T. E. Pryce.

THE MIRACULOUS DRAUGHT OF FISHES.

CHRIST PREACHI[NG] FROM

DESIGN FOR STAINED GLA[SS] BY

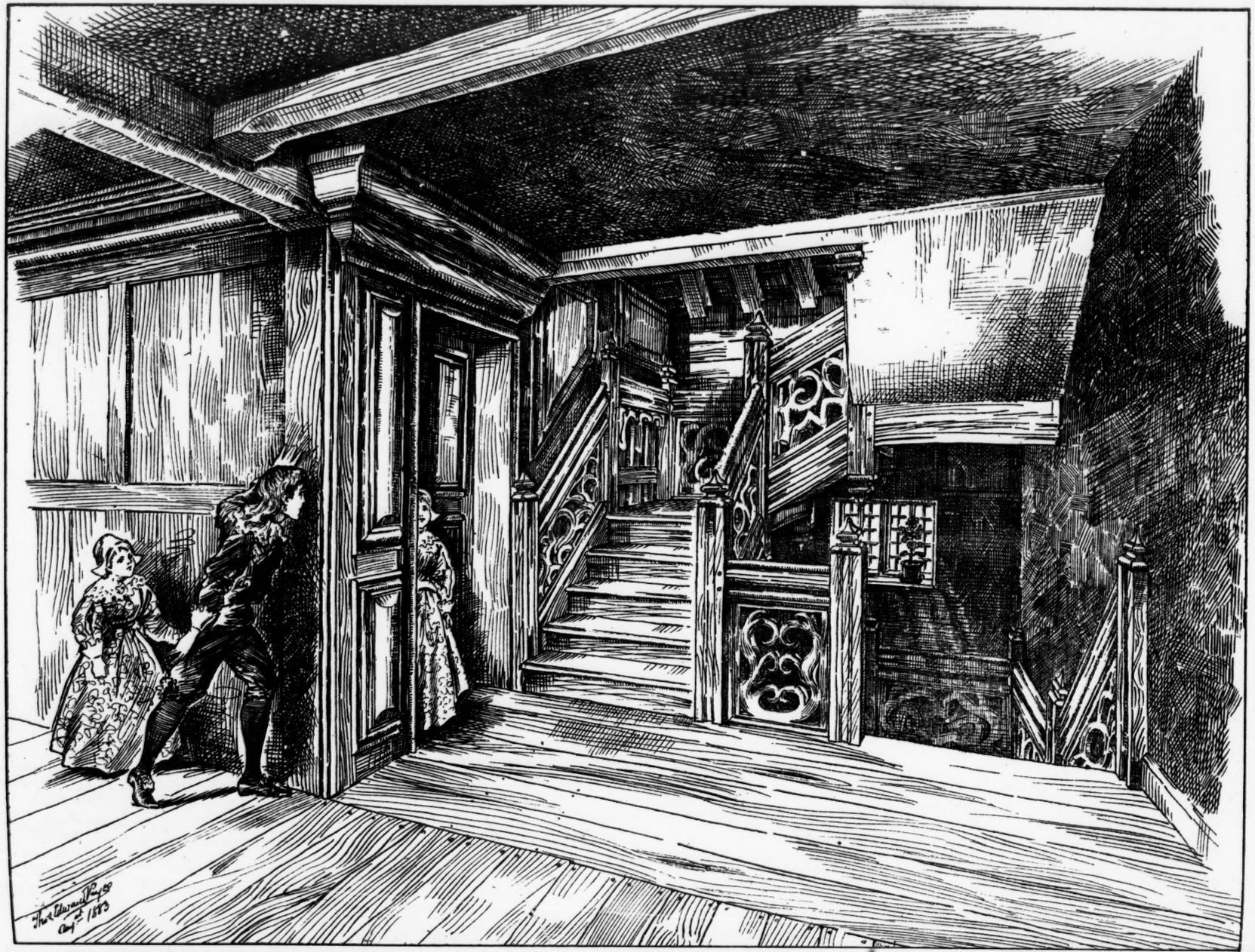
WINDOW IN NEW FE[LT] CHU[RCH]

HIS FROM THE SHIP.

CALLING OF PETER.

INK-PHOTO. SPRAGUE & Co. LONDON.

AS, BY MR. E. BURNE JONES, A.R.A.
TER'S CHURCH, CHESHIRE.



Whiteman & Bass, *Photo-Litho* 236, High Holborn.

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THE STAIRCASE, "PARK," MONTGOMERYSHIRE.—Drawn by Mr. T. E. Pryce.

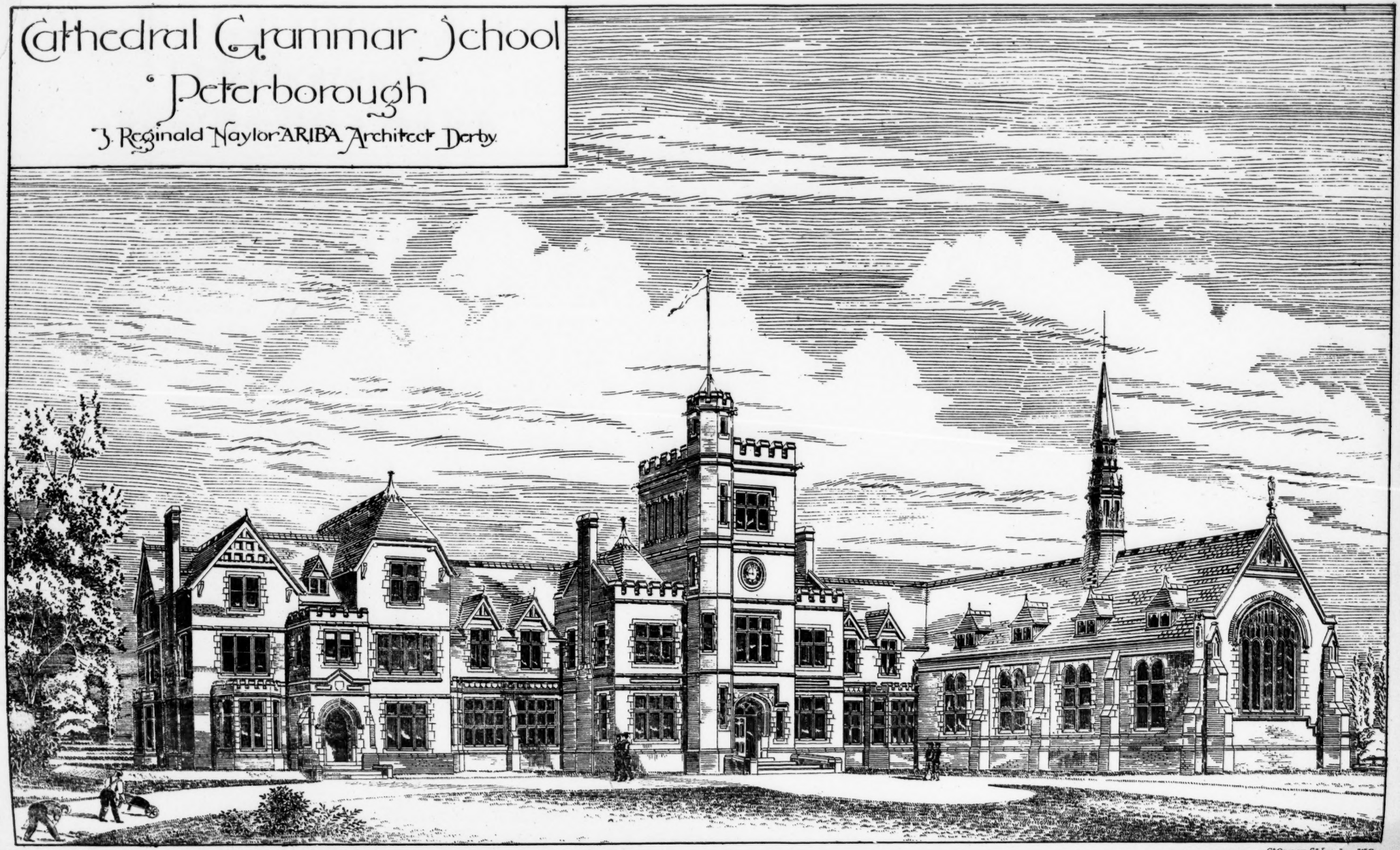
Whiteman & Bass, *Photo-Litho* 236, High Holborn.

Printed by Wyman & Sons, G^t Queen S^t London, W.C.

PART OF STAIRCASE, LYMORE HALL, MONTGOMERYSHIRE.—DRAWN BY MR. T. E. PRYCE.

Cathedral Grammar School Peterborough

J. Reginald Naylor ARIBA Architect Derby.



Wyman & Sons, Photo-Litho. 74 Queen St. London, W.C.

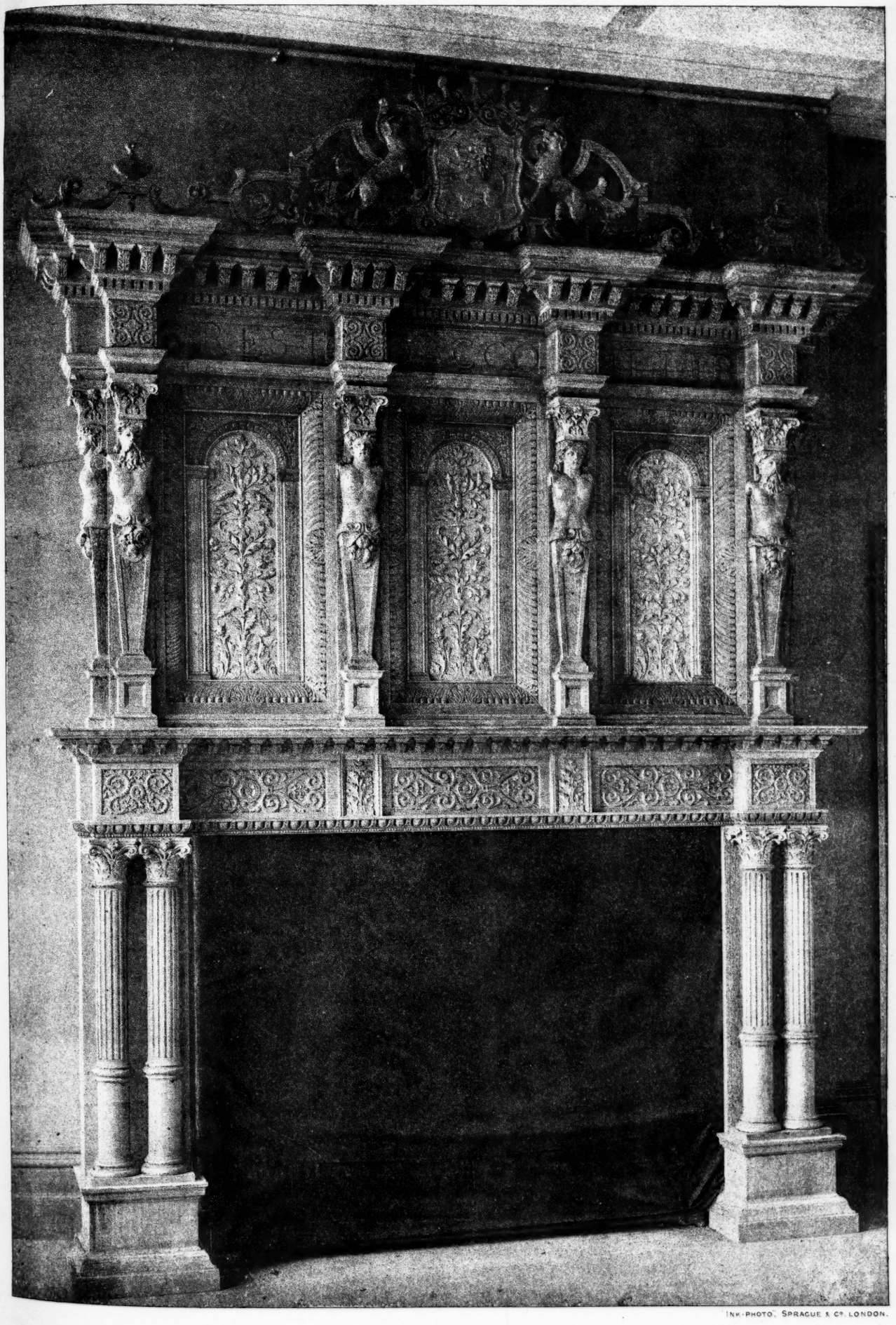
Whiteman & Bass, *Photo-Litho.* 236, High Holborn

Printed by Wyman & Sons, G^t Queen S^t London, W.C.

SHOPS AND OFFICES, EASTCHEAP.—MR. G. EDWARDS, ARCHITECT.

A BANK FOR A COUNTRY TOWN. Design by Mr. Arnold B. Mitchell.

Arch$^{L.}$ Assoc$^{N.}$ Medal Awarded 1885.



INK-PHOTO. SPRAGUE & Co. LONDON.

CARVED MANTEL FOR THE LIBRARY, INGESTRE HALL.

EXECUTED AT THE SCHOOL OF ART WOOD CARVING,

SOUTH KENSINGTON

LYMORE HALL.

Lymore Hall, or lodge, is a mansion belonging to the Earl of Powis, near Montgomery, rebuilt in 1673, by Edward, third Lord Herbert of Chirbury. It continued to form the chief residence of the family till 1714, since when, although kept in fair repair, it has not been regularly inhabited.

It is a large square timber-built house constructed of plain upright quarterings, with a low-pitched roof of three gables towards the front and small gables at the sides, surmounted by a good square lantern with a steep roof and wrought finial of eighteenth-century ironwork at top.

The house is panelled throughout the main rooms internally, some of the bedrooms being hung with tapestry.

The kitchens were all pulled down about the end of the last century, and have never been rebuilt.

The illustration is taken on the main landing of the great staircase.

T. E. Pryce.

CATHEDRAL GRAMMAR SCHOOL, PETERBOROUGH.

The old school buildings in the Cathedral Precincts having proved inadequate, the Dean and Chapter, as governors, decided to remove the school to a site on the Park-road, at a distance of about half a mile from the centre of the town. Advertisements were inserted in the several papers, and seven architects were chosen to compete for the post. The plan ultimately chosen was the work of Mr. I. R. Naylor, A.R.I.B.A., of Derby, who was given instructions to at once proceed with the work.

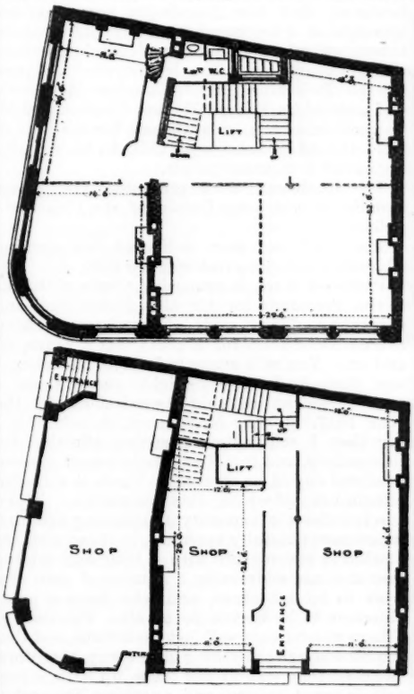
The new buildings provide accommodation for 40 boarders and 150 day boys. The plan is E-shaped, and has the master's house and administrative department on the left, the centre being for access and masters' rooms, and the right end occupied by the school and class-rooms.

The house has three reception-rooms, two of which are respectively 25 ft. by 17 ft. and 20 ft. by 16 ft. and are divided by folding doors, spacious hall, nine bedrooms, dressing-room, bath-room, large kitchen, and pantries, with basement for larder and storage purposes. The dining-hall, 35 ft. by 22 ft.; head-master's study, 18 ft. by 17 ft., commanding a full view of the playground; a spacious and well-ventilated hat and coat place, with slate-top lavatories, lined at the back with white tiles, forms the division between the boarders and day boys' departments. The main corridor, 7 ft. wide, with class-rooms, each 22 ft. by 20 ft., on one side with north light; the entrance and masters' rooms to the front, and large school at one end. This room is 56 ft. by 25 ft., with provision for a library, which will open from the school with revolving shutters, and form a stage for speech-days and other occasions, and will add some 20 ft. to its length. It is 20 ft. to the plate, and 27 ft. to the ceiling at the collar level. The roof is open-timbered, and has moulded tie-beams and curved braces, resting on stone corbels. The dormitories can either be reached by an oak staircase near the main entrance, or at the house end near the dining-hall. They are arranged in the same line to admit of easy supervision. Each boy will have a cubicle of sufficient size to contain his furniture and belongings, except the bed, which will be placed outside, thus incorporating the privacy of the old cubicle system with the many advantages of the open dormitory. Bath-rooms, studies, clothes-rooms, and the blanket stores, all heated by hot water, also matrons' rooms, box-room, and rooms for the junior masters with full supervision of the dormitories, are on this floor. The complete scheme shows gymnasium, laboratory, workshop, bicycle and cricket stores, fives-courts, sanatorium, &c., though for the present only a part of this accommodation as intended has been supplied, though provided for in a temporary manner. Several alterations have also been made to the exterior of the building, detracting from its appearance, though not in any way interfering with its utility.

The materials used for the exterior are Whitwick bricks and Westwood round stone dressings; the windows and other openings having jambs of specially moulded bricks. The roofs are covered with green slates, supplied by Messrs. Ashton & Green. The glazed stoneware latrines are from Messrs. Bowes Scott & Reid, and have Field's flushing-tanks. The heating is by hot water by Mr. Jerram, of Derby; and the thorough ventilation of all parts of the building has been carefully studied. All the principal rooms, dormitories, and passages have double doors fitted with Adams,s spring-hinges and lever apparatas to the fanlight over. Earthenware sinks and baths from Messrs. Stidder & Wilcox are used; also Twyford's "National" and "Unitas" water-closet apparatus, and Doulton's patent cisterns. The drainage is all kept strictly outside the building, all waste-pipes discharge over open traps. The drains are laid in straight runs from point to point, and at each change of direction manholes are provided, allowing of easy examination and removal of foreign substances without disturbing the pipes in any part. Weavers, Potts, & Mansergh's traps and Bellman's gullies are used. The cost of those buildings now completed has been about 8,500*l*. The builder is Mr. Thompson, of Peterborough.

EASTCHEAP HOUSE.

This building has been erected for the Aërated Bread Company, on land acquired from the Metropolitan and Metropolitan District Railway Companies, on the completion of the Inner Circle Railway. The frontage to Eastcheap is 50 ft., and a return frontage to St. Mary-at-Hill of 41 ft. There are eight floors, two being below the ground level; the upper floors are arranged for offices, the access to which is facilitated by a passenger-lift, worked from the Hydraulic Power Company's main. The whole



of the elevation is of Portland stone. Messrs. Martin, Wells, & Co., of London and Aldershot, are the contractors. The passenger-lift is being fixed by Messrs. Archibald Smith & Stevens. The carving has been done by Mr. J. Wormleighton. Mr. George Edwards is the architect; and Mr. W. Sharpington the general foreman. The contract sum was 7,599*l*.

OVER-MANTEL, INGESTRE HALL.

This is an illustration of the carved wooden over mantel, executed at the School of Art Wood-Caving at South Kensington, which we referred to in a "Note" a few weeks ago. It is for the library of Lord Shrewsbury's residence, Ingestre Hall.

DESIGN FOR A BANK.

ARCHITECTURAL ASSOCIATION MEDAL.

The Association Medal has been this year taken by Mr. Arnold B. Mitchell for a design for a Bank for a country town, of which we give an illustration.

The conditions of competition were that the building should comprise a basement and three floors, exclusive of attics, on a rectangular site, 50 ft. by 30 ft., level throughout, with two frontages towards a market-place and the remaining two closed by buildings; banking-room on ground-floor, manager's residence on upper floors. Endeavour has been made to make the design a practical working one and yet to give it some distinctive character of its own: the key plans given show the general arrangement.

EGYPT EXPLORATION FUND.

A general meeting of the members and friends of this fund was held on Wednesday last, at the Royal Institute, Albemarle-street. Mr. C. T. Newton, C.B., presided, and there was a good attendance, including Mr. Flinders Petrie, M. Naville, Dr. Herman Weber, the American Minister, and Mr. John Evans, F.R.S.

The Chairman said their last season began in November, 1884, and first he would speak of Mr. Petrie's operations at Naucratis. They were aware that Mr. Petrie had discovered the site of Naucratis. It was with peculiar satisfaction he (the Chairman) had the honour to make this announcement, because some years ago, when the Oriental Congress met in London, he drew the attention of some very distinguished Egyptologists to the incalculable importance of researches to discover the site of Naucratis. Naucratis gave them the key to the relations between the Hellenic race and Egypt for the period of the beginning of the Psammetichi, 650 B.C., or thereabouts. It was not an easy thing to find a site in a country where the position of the branches of the Nile and of the canals was liable to what might be called "alluvial changes," and where the remains of great cities were only indicated by vast mounds of rubbish. Mr. Petrie had discovered this site of Naucratis in spite of such difficulties. He would not anticipate what Mr. Petrie had to say, but would only remark that Herodotus and other ancient authors had told them that Naucratis was a place where the Greeks had great trade privileges, and where they were able to develope a great commerce under the protection of certain deities whose temples stood there. Naucratis, they found, had left certain remains, which, speaking as a palæographist merely, he considered most precious to the student of Greek archæology. It was many years now since he (the Chairman) had discovered the statues at Branchidæ, which were inscribed with Greek dedications, and which he ventured long ago to assume ranged from 560 to 500 B.C. Now, Mr. Petrie had found numerous inscriptions, for the most part upon painted pottery, the character of which corresponded so accurately to the character of the palæography of the statues in the Archaic room of the British Museum, as to confirm his original assertion that their date was in the sixth century B.C. This alone was something like a result, but besides that, it afforded the means for the first time of putting upon a solid basis the history of Greek fictile art, because the specimens got in Greece itself of that period were, for the most part, without inscriptions. Mr. Petrie, however, had discovered such a number of inscriptions that for the future they would be able to speak with certainty instead of conjecture. This was only one class of the objects discovered. Mr. Petrie had unearthed Greek inscriptions and endless specimens of other arts which were known to be practised in Egypt, such as what were termed Egyptian porcelain and alabaster, and other classes of antiquities. Among these things had been discovered evidences not only of great Hellenic commerce in the sixth and fifth centuries B.C., but of great Hellenic commerce in the after-time, when Alexandria was thought, according to common belief, to have supplanted and dried up the sources of the trade of Naucratis. That this was not the case may be inferred from the enormous number Mr. Petrie had found of the well-known amphoræ with inscribed handles, from Rhodes, which were also discovered at Alexandria, and through which it was possible to track the line of Greek commerce all over the Mediterranean and the Black Sea. These amphoræ dated between the time of Alexander the Great and Augustus. A sample of the antiquities discovered by Mr. Petrie was now being exhibited in one of the Vase Rooms of the British Museum, and that evening some

small samples would be shown. This, however, was merely a small selection from the immense number of objects found by Mr. Petrie. Mr. Ernest Gardner, a young but distinguished Hellenist, has undertaken to proceed to the excavations at Naucratis, and to assist Mr. Petrie there. Mr. Gardner had given special attention to this question of the Greek paleographic work. With respect to the operations at Tanis, they had already received a quantity of heavy pottery from the place, but, as the exploration of that city dealt with matters with which he was unfamiliar, he would ask Mr. Poole to speak on the subject of the work being done for the Egypt Exploration Fund by Mr. Petrie, Mr. Griffiths, M. Naville, and others, with special reference to the Papyri.

Mr. Reginald Stuart Poole said that the large objects to be exhibited in the British Museum were those which could not be easily transported on previous occasions. These would add much to the knowledge of the mythology, geography, and importance of the city of Tanis during the Greek and Roman periods. Some of the documents found had been examined by the most learned authority on demotic papyri, and there was no doubt that they were of great interest. One of the documents contained certain calendar indications, and another a list of signs in hieroglyphic, with a kind of explanation in hieratic. Mr. Griffiths was preparing a careful paper on the subject of these documents. M. Naville would go more fully next evening into his work. No Egyptologist was more cautious in his statements of results and more anxious to present them to the learned world, so that it might deduce its own inferences. The identification of the land of Goshen by M. Naville was of the greatest significance in its bearing on the antiquity of the Pentateuch, and was only second in interest to his discovery of the treasure city of Pethora, built by the Israelites. M. Naville had placed the land of Goshen in the eastern part of Lower Egypt but further to the southward than other explorers, and, therefore, much nearer to Heliopolis and Cairo.

The Chairman then read the financial statement, which showed that during the past year donations and subscriptions had been received amounting to 1,431*l.*, of which 546*l.* had been remitted from the United States, exclusive of the special fund collected there by the Rev. W. C. Winslow, of Boston. The Chairman referred to the valuable services rendered by the hon. secretaries, Miss Amelia B. Edwards and Mr. Poole, as well as by Mr. Winslow, the hon. treasurer in America.

Miss Edwards next gave an account of the Fowler Fund, founded by Mr. W. Fowler, M.P., and appealed for subscriptions to complete it. Miss Edwards announced that Mr. Petrie's work on "Tanis" was ready for issue. In spite of M. Naville's devotion to the work of editing "The Book of the Dead," she believed he might be induced to proceed with his exploratory work.

The Chairman added that it was proposed next season that Mr. Petrie should instal Mr. Gardner at Naucratis.

On the motion of Sir Charles Nicholson, seconded by Dr. Hermann Weber, a vote of thanks was passed to the Trustees and the Principal Librarian of the British Museum, and it was resolved to grant a selection of the antiquities discovered by Mr. Petrie and M. Naville to the Museum.

Mr. E. A. Bond, Principal Librarian, acknowledged the vote. Although the Trustees were unable to use the funds for the purpose of aiding this Society, he thought they might apply to Government on their own behalf, as such a course was justified by the great results of their three years' operations.

Mr. J. S. Evans proposed, and Miss A. B. Edwards seconded, a similar vote of thanks and grant of antiquities to the Arts Museum at Boston, U.S.A.

The Chairman, referring to this motion, said that archæology, of all subjects, was the most strictly international. It was by the study of archæology that they fulfilled the saying of Pericles, "that of illustrious men all earth is the tomb." The memory of the ancient races and what they had contributed to civilisation would outlive their misdeeds, and through the combined efforts of many men and schools of archæology great results would be attained.

The American Minister replied on behalf of the Boston Museum. They might rest assured that these objects would be prized in Boston of all cities, "the Athens of America" as it had been termed. He hoped the time was fast approaching when every good enterprise for the extension of human knowledge and for the improvement of the general condition of mankind would find its co-ordinate branches on both sides of the Atlantic.

A special vote of thanks was also passed to Professor Maspero, coupled with a grant of antiquities for the Louvre. A grant of antiquities to the Royal and Imperial Museum of Berlin was also agreed to.

After passing the usual complimentary votes of thanks the meeting separated.

THE ARCHITECTURAL ASSOCIATION.

The opening meeting of the session was held on Friday, the 23rd inst., at 9, Conduit-street, Mr. C. R. Pink (President) in the chair. There was a very large attendance.

The following new members were elected, viz.:—Messrs. A. B. Yeates, Harold Luck, B. N. Southall, A. Gadsdon, J. W. Little, H. C. A. Colvile, C. Palmer, T. L. Worthington, W. H. Hewish, W. E. Johnson, F. Wood, H. E. Knight, F. R. Barlow, E. C. Brown, C. A. Battie, Alfred Cooke, E. C. Frere, A. W. Mills, and W. L. Eves.

The report and balance-sheet for the year were unanimously adopted. The report, as printed in the "Brown Book," records in detail the work of the past session, and details the changes which have been made in carrying on the work of the Association. As these matters have all been fully reported in our columns during the past year, it is not necessary to recapitulate them. It may be mentioned, however, that the Association now numbers upwards of a thousand members (1,013, to be exact), of whom 802 are resident in London, and 211 elsewhere. The balance-sheet, signed by the Treasurer (Mr. J. Douglass Mathews), and audited by Messrs. Horace Cheston and M. Fawcett, shows a gross income for the year of 953*l.* 15s. 4d., a balance of 152*l.* 4s. 8d. remaining in the Treasurer's hands.

The Chairman next presented the prizes (for list of which see *Builder* of the 17th inst., p. 549).

The Chairman then delivered his opening address, which we print on page 599.

Professor Kerr, in proposing a vote of thanks to the President for his able, instructive, and suggestive address, said:—I have been speaking to this Association for a great many years, off and on. You will scarcely believe me when I say that it is thirty-eight years since I was President of this Association,—in the year 1847. I may be excused, therefore, if I say that I still retain a strong affection for this society, and that I am always most pleased to attend any of its meetings. There is a special pleasure in addressing this Association. When one is under the necessity of speaking upstairs, it becomes painfully apparent, to those who are blessed in mature life with a little enthusiasm, that they are addressing a number of men who wish to be let alone, and who have a great objection to be spoken to at all. The state of things which exists will last their time, and that is quite enough; anything like energy, therefore, as prompting you to stir them up with a long pole, is voted a bore, and anything like enthusiasm is an unmistakable nuisance. When one comes down here, on an occasion like the present, one speaks to those whose minds are young, fresh, and ardent, who can look forward, and not backward, and who can take an interest in that which is beyond the mere consideration of solid pudding. You have said that there are large and burning questions, upon which, at the present moment, you have been unable to touch; and perhaps you will allow me to interest the young men here present in the work which I think the Institute is doing. It is not our province here to enter into what may be called Institute politics, but these young men do not require to be members of the Institute, in order to be justified in taking an interest in its affairs, and they do not all require even to be prospective members in order to entitle them to demand at the hands of those who form the representative society and guild of this great and noble profession, such a policy as is calculated to advance its interests. Therefore, sir, without in any degree trenching upon that particular field which belongs entirely to the meetings of the Institute, I am sure you will excuse me if I endeavour to awaken a certain interest in the position of affairs which I fancy exists at the present moment,—a most critical position of affairs. The most unobservant of us must have noticed that the air is full of political enfranchisement. Not only is Parliament about to be changed,—and eminent and non-eminent architects are candidates for seats in the new legislature, which I earnestly hope some of them will not obtain,—but there is a grand principle before men's eyes, whether for good or evil it is difficult to say. That principle is,—"The broader the base, the firmer the structure." On that, I take it, the franchise of the country is being extended, and that is the principle we have now to apply to our own professional world. In order to understand the true position of the new draft charter, in the light in which those who are not members of the Institute may wish to understand it, it is necessary to go back some ten or a dozen years. At that time Professor Donaldson,—a most estimable and excellent man, most enthusiastic in following up every possible road to the advancement of the art and science of architecture,—this very excellent person, then getting into extreme old age, had managed, I may say, individually, the Institute of British Architects for forty years, and had managed it with honour in every particular. He had started it, had elevated it to a distinguished place, and had maintained it in that place throughout the whole of that long period of time. The principles which he had followed were exactly expressed in the admirable extract you read,—the principles of broad and generous liberal feeling, the absence of jealousy, of restriction, and coercion; the presence of universal, kindly, and honourable fraternity. He looked on the charge he had undertaken in establishing and maintaining the Institute, as a most noble enterprise, in the form of the highest class of a learned society, and during the whole of those forty years he maintained it in gradually increasing dignity upon that high level. But there were some whose views were different from his, and they were perfectly entitled to hold their own views. They were more of trade-unionists, and a certain movement was set on foot, and successfully carried through, whereby,—I will not say the old generous system was upset and a system of trade-unionism established,—but a system was brought to bear upon the government of the Institute, whereby it was supposed, by the creation of a superior or privileged class, the dignity of the profession would be enhanced in the eyes of the public. Now this privileged class was to be identified with what is called the governing body of the Institute. They printed their names in the largest capitals which were permissible, and it was generally understood that an attempt was being made to create an honourable impression in the public mind by the establishment of an aristocracy of "Members of the Council." This was done, I have no doubt, with the best intentions, but it has not succeeded. It is in connexion with this state of things that the present reform is about to take place, and that reform is one in which every man ought to take an interest who belongs directly or indirectly to the profession. The new charter is promoted for enfranchisement, to be chiefly bestowed upon the provincial members. Now the battle is virtually over, one may speak of it without the least risk of giving offence, and it must seem an extraordinary thing that one-half of the members of the Institute, when it was not convenient for them to attend the meetings in London, should have no voice in its affairs. The Chairman has said that the Council felt themselves restrained by the charter; that is not the view I hold of it at all. I do not believe King William IV. ever intended that the provincial members should have no voice in the affairs of the Institute, and I believe it would be easy at this moment, without altering the charter, in a certain way to liberate the provincial members from the position of having no means of evincing an interest in its affairs. But what will interest this meeting more is, that, in the course of the discussions which have arisen with reference to this so-called new charter, the Associates of the Institute have most peremptorily and emphatically demanded a voice in its affairs, and not only a voice, but an equal voice. Whether that is to be granted or not I cannot tell. I do not mind saying that I stand here as the advocate of absolute liberty, equality, and fraternity in all our professional guilds in every possible respect. I will tell you why.

I have often said upstairs there is no man qualified to be a member of the Institute, who is not equally well qualified to be a member of the Council. We are no trade of cheesemongers, but a profession of highly intellectual and cultured men, each of whom is perfectly qualified to engage in all the business which the society can possibly require. And so the youngest Associate, in the peculiar circumstances in which our profession is placed, is fully equal to the work. I, therefore, recommend the young men here to take an interest in the matter, remembering, as the Chairman has said, that this is a democratic association, adopting the principle of widening its basis, judiciously and within reasonable limits. The basis has been narrowed in the case of the Institute, and no good has come of it. But I may recall to your recollection that a much more important enterprise, as I venture to think, is on foot up-stairs. A committee has been sitting, of which I have the pleasure to be a member, on the problem, how to advance, not the enfranchisement of voters, but the higher work of this illustrious profession, by means of what we call departmental action. At present for want of organisation very little is done. I am of opinion that a great deal might be done in the direction of the advancement of the art, the science, and the literature of architecture, and for my own part I care nothing about voting and enfranchisement if I can see these great objects adequately served. This committee has not yet reported, and it is not competent for me to make any definite allusion to what has taken place, but I think I may say we have arrived at conclusions which are liberal and generous, and we have arrived at these conclusions thus far in a spirit which we hope will advance very considerably the interest which outsiders will feel in the movements of the Institute. If I could persuade men outside and inside the Institute to look at the work that has to be done rather than the dignity which is to be attained in pretending to do it, I think I should be able to secure a most important object. I care not a fig for their dignity or their honours, but I want to see the business done. This is a great country, and the Institute is by far the most important and prominent architectural society in the world. Its work is in the widest possible field. The old men are of no use, believe me. No man is of much use in the work of the Institute who is over fifty years of age; that I have learned from experience. At all events, I hope to see the introduction of younger men and a broader position taken up before long, and I hope you will assist those who are working in that direction by giving them your full support. I am glad to see you, sir, in the chair, and I am glad to see so large a meeting, and I am glad to hear and see so many evidences of the prosperity of this society. I hope it will flourish for ever.

Mr. William White, F.S.A., seconded the vote of thanks. Too much, he added, could not be made of the educational advantages offered to students at the present day; at the same time it did not do to rely entirely upon the existence of these. The great advancement to be made was by the use of these advantages, otherwise they would go on in mere mediocrity. For his own part, he wished he had had such educational facilities in his day. When, forty-five years ago, he entered the office of a country architect and surveyor, he was certainly taught some of the principles of construction, of quantities, and of the supervision of work, but little in the way of design or drawing, and he had, therefore, to depend greatly for his knowledge on the studies which he followed out on his own account. The President had stated that the teaching of design was a most important matter, but he would maintain that the careful study of what had gone before, be it good or bad, was of the greatest consequence. He well remembered a literary man, who had to address a number of people periodically, saying that unless he laid in a store of good literature, he found himself simply plodding away in his old strain, and repeating himself over and over again. This was a lesson which architects should lay down as most expressive of their actual needs. They should not limit themselves, as perhaps he had too much done, to one groove in the study of architecture, for the longer he lived the more he had seen the necessity of studying the architectural expressions of all countries.

Mr. Cole A. Adams supported the motion, and referred to the amended scheme of work as given in the Brown Book. One of its main features was that the work was now divided into two distinct classes, so that a student, on reference to the book, was able to see at once the various openings for study. It had been prophesied by some that in the class where the work was to be pure and simple copying they would never get ambitious students to do this, but he hoped that opinion would be falsified by the actual facts. Another departure has been made in the matter of quantities, and he believed a great deal of good would result from it. By teaching exactness and method they would have facts to correct fancies, and the students would become better "all-round" architects.

Mr. Aston Webb hoped that the Committee of Advice would be largely applied to, as they were anxious and willing to afford every assistance to the student. Should the proposed new Charter of the Institute become law, it would be absolutely necessary for all who wished to belong to the head society of the profession to pass the Institute Examination. Although the ordeal was not an unduly severe one, it yet required careful reading in many subjects, and unless members on first joining the Association entered upon a regular course they would find it difficult to pass with credit. He was surprised to find so small a proportion of London men in the last Examination, and believed that a great many of the young students did not sufficiently realise its importance. Modern architecture should be attended to as well as that which had gone before. Mr. Sedding had notably referred to this in his paper at the Church Congress, in urging that the decorative portions of Church work should be laid down more on modern feeling and principles. That the student should learn the grammar of his work was a truism, but that he should neglect the thought and movement of to-day was absolutely fatal to progress or reality in architecture. The certain lack of admiration or feeling amongst modern men for their own work was also to be lamented, and mutual sympathy for each other's work ought to be cultivated. It had often been said that painters liked, sculptors disliked, and architects hated each other's works. This was not quite true, but in passing through towns and seeing new buildings they should endeavour more to pick out what was good in the new buildings, and be able to enter into and sympathise with them.

Mr. J. Douglass Mathews had always looked upon the Association as a conservative and not a democratic body. Certain laws had been laid down at its foundation, and notwithstanding some changes, the Association was now substantially what it had been for the last thirty or forty years, its objects being to assist the members to advancement in their profession. He hoped that in the future some means would be found of extending its usefulness more to the country members.

Mr. John Slater, B.A., remarked that the subject of education could not be too strongly insisted upon. A new sphere of action was, to a certain extent, commencing; he would like to see a closer connexion between the Institute and the Association in the educational work of the profession. Great good would be done if some scheme could be devised by which more lectures could be given, and by which the older body could assist the younger in increasing the means of obtaining knowledge. The Examination ought to be a goal to which all students should direct their endeavours. It was not yet all it might be, and a great deal remained to be done in the way of a thorough architectural education.

The vote of thanks was then carried by acclamation.

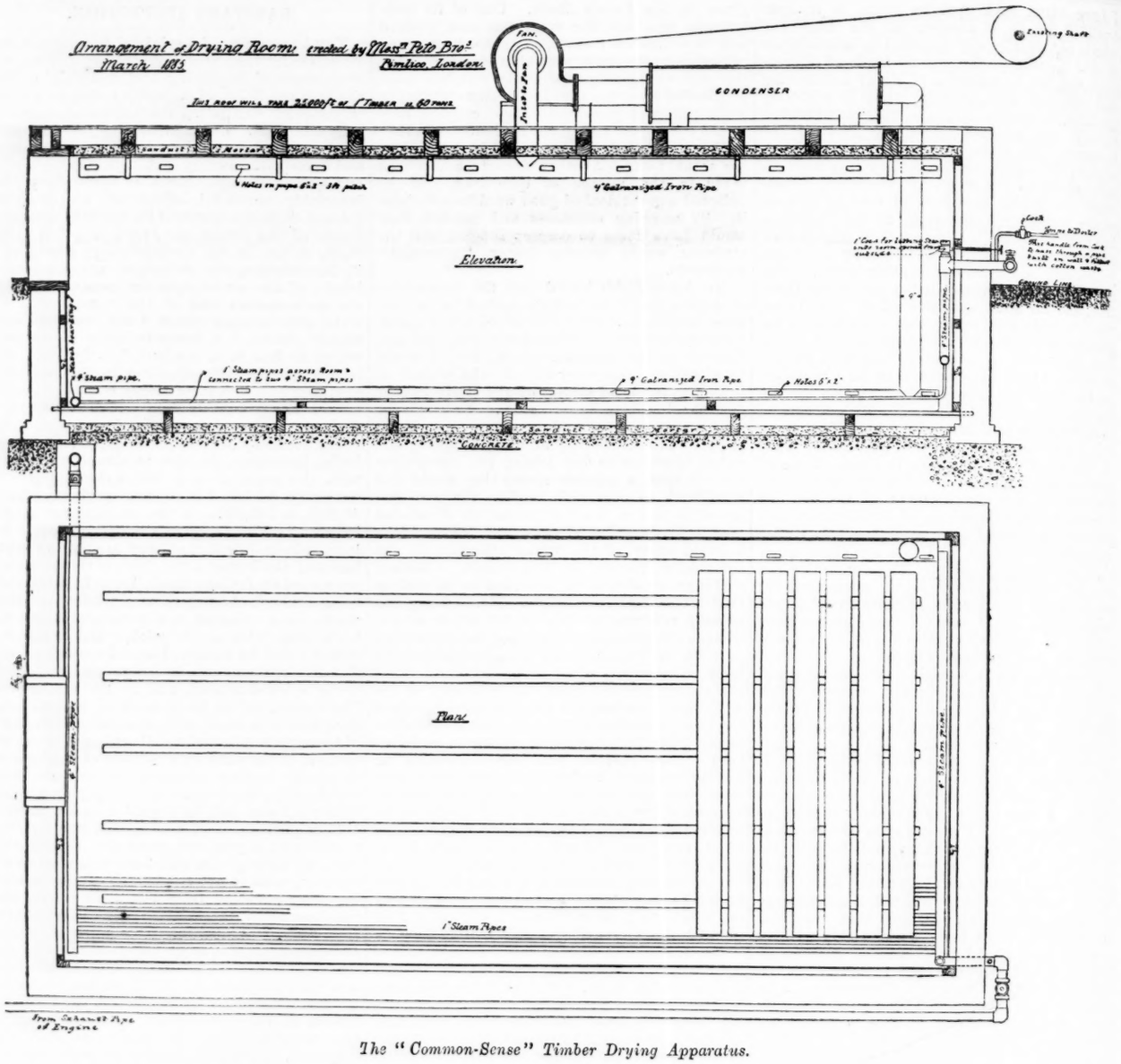
The Chairman, in replying, remarked that Professor Kerr had gone even further than he had in regard to equal voting. With respect to the use of the term "democratic," he had simply meant that the executive of the Association was based on the votes of each and every member.

The proceedings then terminated.

Builders' Benevolent Institution.—We may again remind our readers that the thirty-eighth annual dinner in aid of the funds of this Institution will be held in Carpenters' Hall, London Wall, on Thursday evening next, Mr. Arthur C. Lucas, J.P., President, in the chair.

SANITARY INSPECTION.

The importance of periodical house-to-house visitation for the purpose of sanitary inspection, as a means of improving and maintaining the sanitary condition of a parish; and, as a consequence of decreasing the death-rate, is generally admitted. But comparatively few of our local sanitary authorities possess the energy and enterprise to carry out this step regularly and systematically. Much is taken from the invariably beneficial effect of an efficient general drainage system if the sanitary arrangements of the houses are based on a bad principle, or are in an unsatisfactory condition; if, for instance, the soil-pipes are not ventilated; if the waste-pipes are connected with the main sewer; and if the water-supply to water-closets come direct from the domestic supply cistern. A house-to-house inspection, where it has been conducted, only too truly brings out the imperfections in the sanitary arrangements of a surprisingly large number of houses in our best-drained parishes. A good drainage system lessens, no doubt, the evils which naturally arise when the pipes from sinks, baths, lavatories, &c., are in direct connexion with the main sewer; but a local sanitary authority which has spent, perhaps, from 40,000*l.* to 100,000*l.* on the construction of an improved drainage system would obviously be lacking in its duty if it allowed to exist in the interior of the houses a condition of things which prevented the full beneficial effects of that system being derived. Among some of the few parishes which have adopted the periodical house-to-house inspection is Chiswick, which is already rather noted for its complete and most approved drainage system (with sludge presses and automatic sewer-flushers), and its low death-rate. The inspection has been made of several hundred houses in that parish, and although in some of the most residential and therefore unexpected parts of it, the sanitary condition of the houses, in a large number of cases, has been far from satisfactory, the owners are complying readily with what can only be regarded as the reasonable requirements of the Board, namely, the carrying of a pipe, the same size as the soil-pipe, up through the soil from that pipe above the roof, so as to act as a ventilator, disconnecting the waste-pipe from the main sewer, and the drawing of the water supply of the closets from a separate cistern. This work of house-to-house inspection is greatly facilitated by the use of a useful pocket inspection book which has been prepared by Mr. Ramsden, Surveyor to the Chiswick Local Board, and which details all the points upon which observation has necessarily to be made, so that the inspector, instead of having to write out all his notes in full or nearly so has, in most cases, only to say "yes" or "no" under the heading to which his attention is for the moment directed. In this book, which tends to expedition and completeness in the preparation of these reports, we have, for instance, under the heading of "Drainage," such points as "If connected to sewers," "No. of w.c.'s in basement, ground-floor, and first floor," "sort of pans in w.c.," "if supplied with water," "is soil-pipe ventilated?" "if inside house and where situated," "is sink disconnected?" "are bath and lavatory disconnected?" "is there ventilating syphon in front of the house?" "is there a ventilating-pipe at back?" Under the heading of "Water Supply" we have:—"What company?" "constant or intermittent?" "is w.c. supply separate?" Under "Dust Bins" occur such points as:— "Distance nearest window or door," "if covered," "if in an offensive state," "whether garden or yard to house." Then follow two spaces, one for "remarks" and the other for "sketch-plan, showing drain." These notes are all transferred to a large book with similar headings, and the sanitary condition of every house in the parish is here easily recorded and referred to. The large or office book has, in addition to the above points, the following: — "Suggestions for remedy by the surveyor," "Date of meeting of Local Board when report read," "Decision and order of the Local Board." Then follows space for plan, showing the drain. All these precautions as to disconnexion of waste-pipe and water supply, &c., from the main sewer are not specifically mentioned in the Public Health Act; but the Local Board find warrant for action in the fact that such connexions with the sewer creates, or tends to create, a nuisance injurious to health;



The "Common-Sense" Timber Drying Apparatus.

for the abatement of which they can call in the aid of the provisions of the above-named Act, which means summoning and fining in cases of proved default. The ignorance among some occupiers of houses as to the real use of these disconnexions is indeed very great. A case came recently under the writer's observation, where the occupier (who was also owner) was under the impression that the arrangement of allowing the waste-pipe from the bath to flow into an open receptacle outside the house, at the top of the pipe which led into the sewer, was for the purpose of permitting the inspector of the water company to see when and how much water was unnecessarily wasted; and when the occupier in question was interrogated on the subject, he said he was informed by his jobbing plumber that these open receptacles were required by the water company to facilitate an inspection in their interest. It may be mentioned that the Grand Junction and West Middlesex Water Companies have offered, and the terms have been accepted, to supply from the main the sixty automatic sewer flushers in Chiswick at 4*l.* 4s. each for a year. Notwithstanding this charge, it is calculated that the Chiswick Local Board will make a clear saving of nearly 300*l.* by the new system of sewer-flushing over the old one of putting the hose down the manhole, and waiting till several hundred gallons have been run into the sewer.

The Working Lads' Institute, Whitechapel (opposite the London Hospital), is to be opened by H.R.H. the Princess of Wales, this Saturday, the 31st, at four p.m. Mr. Geo. Baines, jun., of Great Winchester-street, is the architect.

THE "COMMON SENSE" TIMBER DRYING APPARATUS.

In our issue of the 18th April, 1885, we noticed the "Common Sense" Timber Drying Apparatus, a machine which has lately been introduced into this country. We then said: "It seemed to us to be as perfect a system as can be needed or desired," and we now give an illustration of the plan and elevation of a drying-room erected some months ago by Messrs. Peto Brothers, the well-known builders.

The process includes the following conditions necessary to a proper application. An apartment, or several compartments connected, so constructed that they can be tightly closed and heated to the temperature required,—the heating agency being exhaust or live steam. Where the former is used connexion should also be made with the boiler, so that when the works are closed at night, by opening a valve, steam from the boiler may pass into the drying-room's pipes and thus preserve the temperature in the rooms over-night. Uniform temperature as well as uniform action is essential. Sweating the timber is the first step in drying, and is done at the start by opening a valve ejecting a spray of steam on to the timber. The action is similar to that of immersing timber in water, or of floating logs. It dissolves the sap, which is of a glutinous or spongy nature, and the natural moisture at the centre escapes freely, and the wood comes together more compactly and firmer than if sap is allowed to dry down as in seasoning ordinarily.

An exhaust fan is now used to draw the heated moisture-laden air from the room and force it through a condenser back to the room. The condenser extracts from the air thus drawn out its moisture, which, liquified, is discharged through a waste-pipe, while the air, now dry, passes back to the room, and, being rapidly heated by the heat radiated from the steam-pipes at the bottom, its capacity for moisture is thereby increased, and the moisture is more freely extracted from the timber in its circulation through the apartment. The air, again charged with moisture from the sweating timber, is drawn out, and thus the circuit is continually made until the timber is thoroughly dry, which takes from six to nine days to season wet boards and planks in the same proportion, according to their thickness. This is simple, most effectual, and speedy.

First, heating the material to a mean temperature of 125 deg., and maintaining it, with none of the detrimental effects of sudden atmospheric changes. Secondly, circulation of air by means of the fan. Thirdly, condensation, or removal of the moisture.

NON-ACCEPTANCE OF THE LOWEST TENDER.

All over the country complaints are made by builders of the abuse of a clause in invitations to tender, the use of which, within proper limits, is not only justifiable, but absolutely necessary.

That some such saving clause is necessary we are free to admit. It would be altogether absurd to think for one moment that having advertised for tenders one should be bound to accept either or the lowest, even to recompense in any way the tenderers.

Again, it sometimes happens that although a man may be willing and wishful to build, yet he finds the cost of his proposed works is much greater than he anticipated or had been led to believe, and therefore the insertion of the clause in his invitation is a wise provision against responsibilities. Or it does sometimes happen that the proprietor, from unforeseen circumstances, is prevented from carrying out his intentions, and that unwillingly; and then again the clause has its proper use.

But, looking at the misuse of it, we say unhesitatingly it is plainly dishonest that services rendered by fifteen or twenty builders should be rendered for the purpose of learning the exact sum at which the contemplated works may be placed in the hands of this proprietor's friend or that architect's favourite.

If such a system as has recently been adopted continued to obtain there would be an end to all bonâ-fide tendering, as no man who cared one jot for his reputation or had regard for his time would spend money, time, and brains, without the knowledge that his tender would be received and treated with perfectly good faith. It seems enough to us that he should be willing to send a tender on the faith that it will be fairly treated, and not that after the cost of its production it should be used to his disadvantage.

We have been thinking chiefly of those tenders which are necessarily advertised, but much more intensely do our remarks apply to those gentlemen who, asking a certain number of tradesmen to tender, even then refuse to accept the lowest. These cases are numerous, and we cannot but repeat that this means is used to keep the friend or favourite honest.

The remedy, if the disease increases, must rest in the builder's own hands. It seems to us very simple. Ask the question,—Should any tender be accepted, and mine is the lowest, will it be accepted? This may apply both to invitations public or private, and if a satisfactory answer is not given the builder must be content to forego his chance, or he tenders with the knowledge that probably he will be defrauded of his money and knowledge. We call to mind one architect's invitation, which is always couched thus:—"Mr. A. B. does not bind himself to accept any tender, but if either is accepted it will be the lowest." In this gentleman's hands a builder may feel himself perfectly safe, and we commend his example to those of his brethren who use other forms.

We have, we think, pointed to what is felt by builders to be a great and growing evil, but we hope it will be only necessary to call attention to the matter, and trust firmly that the well-known honesty of English gentlemen will, without resort to any extreme means, be sufficient to remedy the wrong.—*The Builder's Blue-Book.*

A NEW PATENT LOCK.

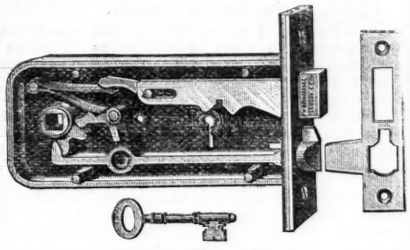
We have had submitted to our notice samples of a new lock, which seems to possess great merit, and concerning which its introducers write,—

"Many attempts have been made of late years to avoid the constant source of annoyance caused by locks being the wrong hand for the work required. The error of ordering locks right hand instead of left is well known. The builder's right is often, to the ironmonger's view, a left-handed lock. A workman is sent into the country to replace a lock, and finds he has been improperly instructed as regards the hand; in fact, this difficulty is proverbial. It is not surprising, therefore, for these reasons, and also the necessity for keeping double stocks, that much thought has been given to the question. Numerous locks, with loose reversing bolts, have been introduced. The general difficulty with these has been the liability of the bolts to become defective and loose in consequence of the play given to this important part of the lock. In nearly all these cases the chisel-head bolt has been adhered to, an attempt with the square head and wheel in the centre has been tried, but it has failed, principally, because the pin was not easily fitted or satisfactory. Even if the pin stood, the bolt would wear until the square-head would have to meet the striking-plate, and this meant destruction to the door-frame.

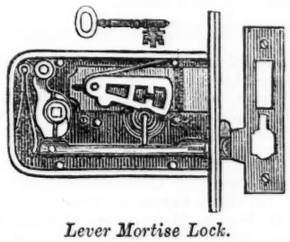
In 1868, the idea of a square head with a rib was attempted, but from the liability of it sticking on one side of the bevel of the square head, this has never made any headway. In 1878, Mr. J. Green introduced his well-kuown cylindrical bolt reversible double-handed lock, which had a fair sale, but among its defects was the bolt being loose, and also the difficulty of explaining the mode of reversing.

In 1884, Messrs. J. Green and J. T. Green apparently hit upon the method which is here illustrated.

The illustrations represent the tumbler and the lever locks, showing the cylindrical head and double bevel, in combination with a rib or ribs, thus giving the double-handed lock without any apparent drawback.



Tumbler Mortise Lock.



Lever Mortise Lock.

The bolt strikes easily on the plate, and takes a firm hold, suitable for either right or left hand. The locks are all hand-made. The price does not exceed that of ordinary square head bolt locks."

Messrs. F. W. Reynolds & Co., of 73, Southwark-street, have secured the sole right of sale of this patent lock.

WHAT IS A NEW STREET?

At Worship-street Police Court on Wednesday last, Messrs. Lawrance & Sons, builders, of Wharf-road, City-road, appeared to answer three summonses granted at the instance of the Metropolitan Board of Works for three offences under the Metropolis Management and Building Acts (Amendment) Act, 1882, in respect of some blocks of artisans' dwellings erected by them and known as Chatham-gardens, Nile-street, Hoxton. Mr. Avory, barrister (instructed by Mr. Thomas Burton), appeared for the Metropolitan Board of Works; and Mr. Grain, barrister, represented the defendants. Only one summons was now entered into, viz., that for failing to give notice of the intended formation of the way or passage, under the 7th section of the Metropolis Management and Building Acts (Amendment) Act, 1882 (45 Vict. cap. 14).

Mr. Avory stated the case, and read the section of the Act in question, which is as follows:—

"Where after the passing of this Act it is intended by any person to form or lay out any road, passage, or way for building as a street for the purposes of carriage traffic or of foot traffic only, in such manner that such road, passage, or way will not afford direct communication between two streets, such person shall, at least three months before such road, passage, or way is begun to be formed or laid out, make an application to the Board giving notice of such intention, and setting out a plan of the proposed street, with such particulars in relation thereto as may be required by the Board, and if it appears to the Board that it is expedient that such road, passage, or way should not be formed or laid out in manner aforesaid, or that such road, passage, or way should be formed or laid ont in manner aforesaid subject to any conditions which the Board may prescribe, the Board may, by order made at any time before the expiration of the said period of three months, decline to sanction the formation or laying out of such road, passage, or way in manner aforesaid, or may sanction the formation or laying out of such road, passage, or way in manner aforesaid subject to such conditions as they may prescribe, and thereupon, and until the Board shall otherwise direct, such road, passage, or way shall not be formed or laid out for building as a street in manner aforesaid where the Board have declined their sanction, or shall not be formed or laid ont for building as a street in manner aforesaid, except in accordance with the conditions prescribed, where the Board have given their sanction subject to such conditions. Any person forming or laying out, or commencing to form or lay out, or keeping open any road, passage, or way so formed or laid out in manner aforesaid contrary to the provisions of this section, shall for every such offence be liable to a penalty not exceeding forty shillings, and to a further penalty not exceeding twenty shillings for every day on which the offence is continued after the day on which the first penalty is incurred. Provided always, that in case the said person so intending to form or lay out any road, passage, or way as aforesaid, considers that any of the conditions prescribed by the Board are unreasonable, then the said person so objecting to the said conditions may appeal to the police magistrate for the district in which the said road, passage, or way is situate, and his decision shall be final upon the question."

Mr. Avory having explained the nature of the scheme, which was described in Mr. George Godwin's letter to the *Builder* for Oct. 3, p. 478, and again referred to in last week's *Builder*, p. 562), Mr. Charles Fowler, the District Surveyor, was called to depose to the width of the passage between the buildings; and Mr. John Hebb, the Assistant Architect of the Board, was also called. Mr. Hebb, in answer to questions put to him in cross-examination, said that, whatever may have been the character of the cottage property formerly occupying the site, the new buildings (consisting of two lofty blocks of artisans' dwellings, each 509 ft. long, placed only 24 ft. apart, and each 35 ft. high to the eaves, with no outlet at the far end, thus forming a *cul-de-sac*, and closely hemmed in by surrounding properties), owing to insufficiency of light and air, would be the reverse of an improvement from a sanitary point of view.

For the defence, Mr. Grain admitted that notice had not been given, but contended that such notice was not necessary, inasmuch as the passage or way between the two blocks of buildings was not a new street within the meaning of the section. He said that when the buildings were completed it was intended to put up a pair of gates at the entrance to the passageway between the dwellings, and to station a gatekeeper there.

The Magistrate (Mr. Hosack) dismissed the summons on the ground that the case did not come within the terms of the section relied upon, and he allowed the defendants 5*l.* 5s. costs.

ILLICIT COMMISSIONS.

Sir,—The practice of offering,—I will not say receiving,—commissions to surveyors and other officials employed under the Public Health Act has, in my experience become so general that I venture to address you on the subject, in the hope that through the publicity of your columns some means may be found of preventing such dishonest practices.

The 38th and 39th Vict., c. 55, sec. 189, provides that "Every urban authority shall from time to time appoint fit and proper persons to be Medical Officer of Health, Surveyor, Inspector of Nuisances, Clerk, and Treasurer." And sec. 193 enacts that "Officers or servants appointed or employed under this Act by any Local Authority shall not in any wise be concerned or interested in any bargain or contract made with such authority." "If any such officer or servant" "exacts or accepts any fee or reward whatsoever other than his proper salary, wages, and allowances, he shall be incapable of afterwards holding or continuing in any office or employment under this Act, and shall forfeit and pay the sum of fifty pounds." It might be thought that the above sections would amply protect the ratepaying public from fraudulent practices, but from experience I can testify that it is not so. Commissions have from time to time been brought, sent, or offered to me. Within the past week no less than three such offers have been made to me, which, if accepted, would more than equal my annual salary. Why should firms claiming respectability stoop to such underhand practices? Simply because of the keen competition in trade, and the willingness of some unprincipled officials to accept such commissions. Why do surveyors or other officers run the risk of loss of office and fine? For two reasons. Firstly and mainly, owing to the smallness of the salaries offered by many local authorities, which no qualified (I do not include medical officers) man of integrity and experience could possibly subsist upon. Secondly, the practice, common in many places, owing to the constitution of the local authority, to "pitch-fork" into office of responsibility and trust the "local practical man," the "jerry-builder," or others of a similar class. Without further encroaching on your valuable space by enlarging on the vast sum annually expended by the local authorities, which passes either directly or indirectly through their surveyors' hands, I beg to offer the following suggestions with a view of remedying the evils complained of:—

1. That any person offering or attempting to bribe an officer of the local authority should be liable to a substantial penalty. 2. That none but properly-certified men should be eligible for the position of Surveyor or Inspector of Nuisances.

A Local Surveyor.

Leicester Water Supply.—The town of Leicester now draws its water supplies from two streams flowing from Charnwood Forest, with impounding reservoirs at Thornton and Bradgate. A further supply having become necessary, Messrs. T. and C. Hawksley, of Westminster, the consulting engineers to the Corporation, advised that another stream upon Charnwood Forest, the Blackbrook, should be acquired. This advice having been confirmed by a report from Mr. J. B. Everard, of Leicester, who was appointed to make an exhaustive inquiry into the whole question, has been accepted by the Town Council.

OLD OAK ROOM, FORMERLY AT NUREMBERG.

Sir,—In your last issue you were kind enough to insert an engraving of this fine room, and in your article thereon you say that its fate is unknown to you. It may be of interest to yourself and readers to know that I have re-erected it in the mansion of Mr. C. D. Kemp-Welch, at Broadlands, Ascot, and I can assure you that its present owner really appreciates it and highly prizes his acquisition. In the re-erection we followed the old lines exactly, and I received the most valuable and efficient assistance from Mr. Kemp-Welch's architect, Mr. W. West Neve. J. Ichenhauser.

*** A correspondent has written to us in regard to the discrepancy between the style of this room and the date claimed for it,—which, indeed, struck us as remarkable at the time. We simply gave the history of the room as furnished to us by those who professed to have it from authentic sources. But the penetration into Germany at that date (say *circa* 1510) of Renaissance details in so advanced a shape is next to impossible, if we are to regard it as the work of a German artist. We omitted to note this at the time.

VENTILATION OF SEWERS BY SMOKE STACKS.

Sir,—For the information of your correspondent of last week (L. Brown), I beg to say that this system has been carried out in some of the highest parts of the town of Darlington, viz., in the east and north wards. It was adopted at the instigation of Mr. G. G. Hoskins, F.R.I.B.A., who is a member of the Town Council, and I believe with the best results.

I enclose my card, and remain,
Oct. 28, 1885. Darlingtonian.

Sir,—Your correspondent, Mr. L. Brown, will find a list of eighteen towns where this mode of ventilation has been and is now in use, with the opinions of several surveyors on this subject, if he will refer to the book (advertised in the *Builder*), by Messrs. Bancroft, on "Tall Chimney Construction," pp. 134–35. H. S. & Co.

GAS COILS.

Sir,—Will any reader of the *Builder* kindly give an opinion as to the gain (if any) in the amount of heat given off from a coil heated by gas, and if it is greater than would be given off by the naked gas flame,—the same burners being used in each case, and a similar arrangement for taking away the fumes? A. B.

RECENT PATENTS.

ABSTRACTS OF SPECIFICATIONS.

8,259, Glazing. F. Primrose and J. Mellowes.

The glass is supported in turned lead bars grooved at the sides to receive it. These bars are sometimes made to fit over a bar of iron. The purlins are grooved to carry off water condensing on the under side of the glass, and channels are cut from the groove to the outside to conduct the water. To enable planks to be supported over the glass for cleaning or repairs, iron brackets are secured to the rafters. The brackets are bent up at the ends, and carry iron bars, upon which the planks may be laid.

9,793, Plumb-rule. T. Wright.

A plumb bob is fixed to a rod pivoted at the upper end, a pin at the other end controls a pivoted index finger showing when the rule is exactly vertical. The working parts are covered by a casing to protect them from wind and weather. A spirit level and thermometer may be attached.

10,801, Door-knob. H. Owens.

The knob is attached to the spindle by a screw passing right through. Holes are bored in the neck of the knob at right angles, and in different positions, for better adjustment. The screw is held in place by a rose, which is turned and fixed to the door. The rose fits over the knob, and is secured by a collar which screws on to the neck of the rose.

11,666, Fireproof Doors. J. Edwards and A. Rogers.

Fireproof doors are made hollow and filled with asbestos or other suitable material, and supported on rollers or pulleys. A space within the door contains the mechanism for moving it, consisting of a screw working into a long nut fixed to the wall, and, at the other, worm and worm-wheel. A pair of bevel wheels enable the screw to be turned by a handle from either side of the door, or from the end.

1',890, Horticultural and other Buildings. W. Page.

Cast-iron columns, adapted to retain the brickwork and side-lights of the building in position, are erected at suitable intervals. They are formed with flanges extending from the ground to the top, between which the ends of the brickwork enter. The portion in the ground is cast with a foot, strengthened by four ribs. Ears are formed at the upper ends by which opposite columns may be tied together, and a wall-plate is bolted along the top of the wall to flanges cast on for the purpose.

12,614, Nosing for Stair-treads. F. Hembry.

On a backing of indiarubber is laid a perforated metal plate, or a sheet of wire gauze, to which is cemented a second sheet of indiarubber. The cement passing through the perforations unites the whole firmly together. Instead of using cement the sheets of rubber may be placed on a plate on an uncured state, and afterwards attached to it by vulcanisation.

11,960, Glazing. H. Crewe.

The rafters or sash-bars are grooved to carry off water, and the glass rests on the edges of the grooves. The glass is secured by a clip fastened by a screw. The hole through which the screw passes is elongated so that the clip may be slidden along to release the glass if desired.

NEW APPLICATIONS FOR PATENTS.

Oct. 16.—12,322, F. Smith, Wind-baffling Chimney Top.—12,328, R. Lee, Construction of Fireproof Pillars and Columns.—12,339, H. Sloane, Chimney Cap.—12,370, F. Wordley, Improvements in Electric Bells.—12,379, G. Wynne, Fastenings for Doors, &c.

Oct. 17.—12,383, A. Campbell, Manufacture of Artificial Stones and Concretes.—12,390, J. Armstrong, Improved Forms of Building Materials.—12,391, H. Wiesen, Manufacture of Bricks.—12,392, C. Fellows, Safety Sash Fastener.—12,393, J. Northwood, Construction of Ventilators.—12,397, T. Cleathers and Others, Kitchen Ranges.—12,402, C. and R. Marshall, Casements or Window Sashes.—12,403, J. Deeley, Flushing Cisterns.—12,405, J. Allen, Brick and Tile Making Machinery.

Oct. 19.—12,448, H. Wood and Others, Sash Fasteners.—12,458, E. Preston, Spokeshaves, Planes, &c.—12,468, J. Cushing, Improved Water-closet Basin.—12,470, T. Murphy, Whitewash or Distemper Brush.—12,471, S. Johnson, Flushing Apparatus for Closets, &c.—12,477, G. Smith, Combination Cowl or Ventilator.

Oct. 20.—12,505, W. Allen, Construction of Self-flushing Water-closets.—12,507, H. Lory, Bolt, with Plate or Plates for Lavatories or Water-closets..—12,508, A. Kerr, Water-closet Cistern.—12,525, W. Scrymgour, Construction of Floorings, Roofs, and other Structures.—12,529, J. Collier, Opening Fanlights, Hinged Windows, &c.—12,539, W. Merryweather, Closet or Room Indicator.—12,541, G. Heinsius, Door Bolts, &c.—12,542, E. Ferrari, Improvements in Ladders.—12,547, E. Verity and B. Banks, Opening, Closing, and Regulating Fanlights, &c.—12,550, F. Austin, Antiseptic Basin for Closets, &c.—12,563, T. Castle, Machinery and Kilns for the Manufacture of Cement.

Oct. 21.—12,580, S. Smith, Automatically Flushing Closets and Drains.—12,584, A. Gunn and T. Caisley, Imitation Inlaid Work.—12,585, R. Leigh, Fireproof Ceiling Laths.—12,605, G. Thornton, Improved Door Silencer.—12,620, F. Morris and J. Fox, Apparatus for Securing Sliding Sashes.

Oct. 22.—12,634, J. Higginbotham and H. Holland, Window-sash Fasteners.—12,637, J. McMurtrie, Improvements in Water Fittings.—12,662, J. Greenwood, Automatic Disinfecting Apparatus.—12,672, J. Cornish, Tiles for Floors of Malt and other Kilns.

PROVISIONAL SPECIFICATIONS ACCEPTED.

10,480, W. Margetts, Loading or Charging Cement Kilns.—10,659, H. Sainsbury, Spring and Air Apparatus for Closing Doors and Gates.—10,772, J. Johnson, Ventilators and Chimney Cowls.—10,886, W. Wilkinson, Construction of Footpaths and other Floorings or Pavings.—10,903, W. Wood, Decking for Bridges.—11,228, J. Totton, Treads for Staircases, Passages, &c.—11,408, H. Milsom, Paring Heads and Cutters for Woodworking Machinery.—11,441, G. Glanville, Improvements in Screws.—11,549, J. Parker, Manufacture of Fireclay Bricks.—11,677, H. Shaw, Attachment for Screw-drivers.—9,209, C. Rowlands, Machine for Sawing, Mortising, Moulding, &c.—10,347, G. Blake, Turn Buckle Lead Fastener.—10,864, T. Milo, Door Knockers.—10,915, H. Hartung, Door Checks.—11,001, W. Hassall, Composition or Cement for Jointing Stoneware, Concrete, and other Pipes.—11,174, J. Watson, Manufacture of Cement.—11,471, F. Druce, Lock or Catch for Securing Fenders to Mantelpieces, Walls, &c.—11,690, E. Lucas, Improvements in Water-closets.—11,811, J. Gurr, Joiner's Bench Knife.—12,148, W. Holman, Improved Lock.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to opposition for two months.

9, J. Hill, Improvements in Rim Locks, Drawback Locks and Latches.—217, W. Court, Woodblock Flooring.—11,101, W. Dupré, Cowls to Prevent Down-draught.—16,951, S. Hazeland, Machinery for Planing Wood.—389, D. Dickinson, Device for Preventing the Over-sliding of Drawers, Shelves, Sliding Doors, &c.—9,642, J. Twyerould, Improvements in Cooking Stoves.—10,813, W. and G. Barker, Improved Mantel-piece, Chimney-piece, and Over-mantel.—10,294, C. Roberts, Apparatus for Collecting Rain Water.—11,171, S. Richardson, Apparatus for Facilitating the Painting and Repairing and Cleaning and Window Frames.—11,275, F. Biggs, Tubular-cased Mortise Locks.

RECENT SALES OF PROPERTY.

ESTATE EXCHANGE REPORT.

Oct. 15.

By Debenham, Tewson, & Co.

Bromyard, near—Freehold cottage and 5a. 1r. 26p.	£400
Two enclosures of land, 11a. 1r. 37p.	270
Freehold cottage and 6a. 1r. 1p.	350
Freehold cottage and 11a. 0r. 12p.	830

Oct. 20.

By W. H. Moore.

Regent's Park—104, Osnaburgh-street, 39 years, ground-rent 28*l.*	350
Brunswick-square—15, Grenville-street, 7 years, ground-rent 10*l.* 10s.	300

By C. W. Davies.

Dalston—39, 41, and 43, Holly-street, 52 years, ground-rent 15*l.*	615
23, 25, 27, and 29, Shrubland-grove, 57 years, ground-rent 16*l.*	1,490
56 and 58, Parkholme-road, 51 years, ground-rent 2*l.* 16s.	1,080
Goswell-road—No. 89, 42 years, ground-rent 70*l.*	1,200
Aldersgate-street—28 and 29, Glasshouse-yard, freehold	1,200
Golden-lane—The Hatfield-street Schools, freehold	1,200
Old-street—14 and 15, James-street, leasehold rental, 22 years	400
City-road—19, Leonard-street, rental of 40*l.*, term 3 years	90
Lower Clapton—Freehold ground-rent of 48*l.*, reversion in 90 years	1,200
Freehold ground-rent of 9*l.*, reversion in 84 years	240
Freehold ground-rent of 6*l.* 10s., reversion in 84 years	175

By Debenham, Tewson, & Co.

Rotherfield, Sussex—Part of Sandhill Farm, 26a. 2r. 14p., freehold	700

Oct. 21.

By Baxter, Payne, & Lepper.

Foot's Cray, Kent—The lease of "The Cat" beer-house	520

By H. Oughton & Son.

Battersea—6 and 7, Park-place, 47 years, ground-rent 10*l.*	385
Walworth—43 and 47, Mann-street, 66 years, ground-rent 7*l.* 5s.	600
Battersea—90 to 96 even, Henley-street, 83 years, ground-rent 20*l.*	700

By Randall & Beard.

East Finchley, Western-road—"Heathfield Lodge," 95 years, ground-rent 7*l.*	805

Oct. 22.

By Hards & Jenkinson.

Bermondsey—Ground-rent of 60*l.* a year, reversion in 98 years	1,580
Peckham—67, Clifton-crescent, freehold	500

By C. C. & T. Moore.

Dagenham—Four freehold cottages	360
The freehold chapel adjoining	160

By Furber, Price, & Furber.

King's-cross—21 and 22, Manchester-square, 59 years, ground-rent 10*l.*	1,140

By B. Brown.

Poplar—Improved ground-rents of 123*l.* 4s. 4d., term 67 years	2,190
Improved ground-rents of 29*l.* 10s., term 67 years	635
Bromley—Improved ground-rents of 18*l.*, term 54 years	340
Canning Town—The "Lord Nelson" public-house, freehold	1,250
Barking-road—The "Balmoral Castle" public-house, term 78 years	510
Poplar—Ground-rent of 13*l.* a year, reversion in 38 years	270
No. 7, Stainsby-road, 32 years, ground-rent 5*l.* 5s.	465

By Wilkinson & Son.

Brighton—60, Montpelier-road, freehold	1,650
No. 4, Clarendon-terrace, freehold	2,950
Redhill, Surrey—The "Hermitage," 78 years, ground-rent 11*l.*	530

Oct. 23.

By R. B. Briggs.

Tottenham—Ground-rents of 55*l.* a year, reversion in 92 years	1,200

MEETINGS.

Monday, November 2.

Royal Institute of British Architects.—Opening Meeting of the Session. Address by the President, Mr. Ewan Christian. 8 p.m.

Society of Engineers.—Mr. J. B. Redman on "Tidal Approaches and Deep-water Entrances." 7·30 p.m.

Clerks of Works' Association.—Mr. R. Wheeler on "The Sanitary Work of Two Houses lately Erected." 7·30 p.m.

Liverpool Architectural Society.—Mr. Thomas Mercer "On Stone: its Properties and Adaptability." 7 p.m.

Wednesday, November 4.

Builders' Foremen and Clerks of Works Institution.—Ordinary Meeting. 8·30 p.m.

Thursday, November 5.

Builders' Benevolent Institution.—Thirty-eighth Annual Dinner, Carpenters' Hall, London Wall. 6 p.m.

Royal Archæological Institute.—(1) Mr. Flinders Petrie on "Naucratis." (2) The Rev. B. W. Gibsonne will read some "Notes on Wolvey Church." 4 p.m.

Friday, November 6.

Architectural Association.—Mr. T. Blashill on "Italy. For Students." 7·30 p.m.

University College.—Professor C. T. Newton on "Greek Inscriptions." (III.) 4 p.m.

Saturday, November 7.

Association of Public Sanitary Inspectors.—Mr. G. B. Jerram, Chairman of the Council, will deliver his Annual Address. 6·0 p.m.

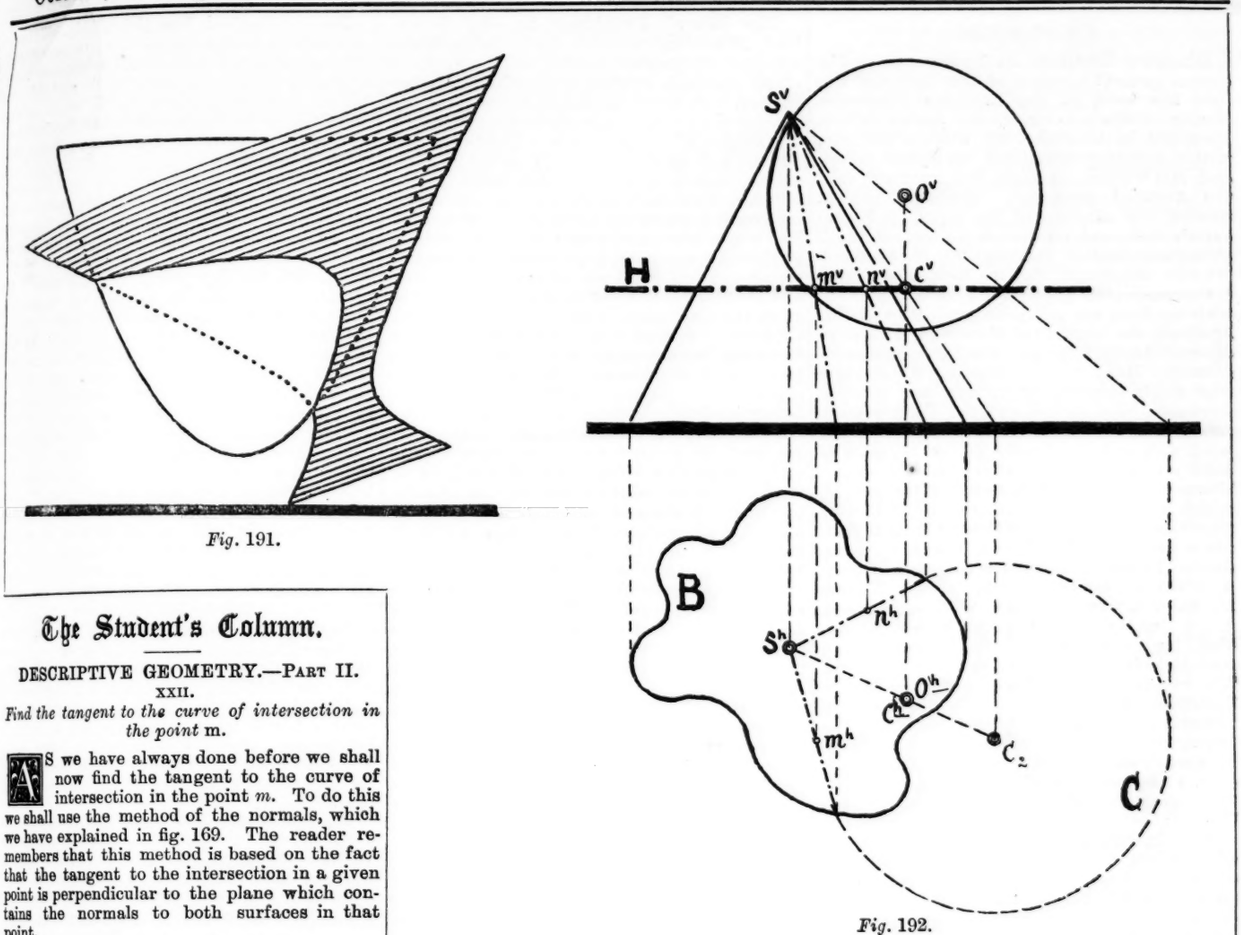


Fig. 191.

Fig. 192.

The Student's Column.

DESCRIPTIVE GEOMETRY.—Part II.

XXII.

Find the tangent to the curve of intersection in the point m.

As we have always done before we shall now find the tangent to the curve of intersection in the point m. To do this we shall use the method of the normals, which we have explained in fig. 169. The reader remembers that this method is based on the fact that the tangent to the intersection in a given point is perpendicular to the plane which contains the normals to both surfaces in that point.

The normal to the paraboloïd is found in the ordinary way. By a perpendicular to the meridian outline drawn from a^v we find the point r, where the normal from the point m cuts the axis of the paraboloïd. The normal is, therefore, $m\ r$.

The normal to the hyperboloïd cannot be found in the same way, for we have not got the outline of that surface. The plane tangent to a surface in a given point contains all the tangents to that surface; therefore, if we draw on the turned-down section the tangent $\beta_2\ t^v$; this tangent (when the section is brought back to its original position) will be contained by the plane tangent to the hyperboloïd in the point β; and, on the other hand, the tangent plane will also contain the generator G of the hyperboloïd. The first tangent (which we call βt in its position in space) cuts the meridian plane in the point t, and the generator G cuts the same meridian plane in the point s; therefore the line $t^v\ s^v$ is the elevation of the trace where the tangent plane to the hyperboloïd in the point β cuts the meridian plane. As we know that the vertical projection of the normal in the point β will be perpendicular to the trace $t^v\ s^v$ of the tangent plane, we can draw $\beta^v\ n^v$ perpendicular to $t^v\ s^v$ and get thereby the point n, where all the normals along the same parallel will cut the axis of the hyperboloïd. The line $m\ n$ is, therefore, the normal to the hyperboloïd in the point m.

On the meridian plane, the line which connects the points r and n is a trace of the plane of the normals (the plane of the normals is represented by the triangle $m\ n\ r$), the elevation of the tangent $m^v\ \theta^v$ will, therefore, be perpendicular to the line $r^v\ n^v$. Likewise, if we prolong the line $r^v\ n^v$ until it cut the plane P in the point ρ we find that the plane of the normals cuts the horizontal plane P along a line projected on the plane in $m^h\ \rho^h$, and therefore, the plan of the tangent $m^h\ \theta$ is perpendicular to the line $m^h\ \rho^h$.

Observe, that as we only required the direction of the traces of the plane of the normals, we have operated by means of the traces of that plane on planes parallel to the projection planes such as the meridian plane and the horizontal plane P; for these traces are parallel to the traces made on the original projection planes, and are more readily found.

The reader will get a clearer idea of the appearance of these two surfaces and their intersection by the fig. 191, where we have given the outlines of both surfaces. The hyperboloïd has been shaded and the paraboloïd left white.

The outlines of each surface, which are hidden inside the other surface, are marked by dotted lines only.

Note.—The section of the Greek Doric capital is a portion of a conic section sometimes a parabola, sometimes a hyperbola, but yet the capital is not either a paraboloïd or a hyperboloïd of revolution; because, although it be a surface of revolution, the axis of revolution does not correspond with the axis of the conic section, which forms the meridian of the capital.

We have now given special methods of finding the intersection of certain surfaces; but we can always get the intersection of any two surfaces by means of sections made in both surfaces by horizontal planes. This method is sure, but often very long. In some cases there is an artifice of construction which very much shortens the work. We refer to the method of

Conic Projections or Perspective Projections.

Suppose we have a cone of vertex s (see fig. 192), the base of which is a sinuous irregular line B, and we require the intersection of that cone by another surface, such as a sphere, *the horizontal section of which is always a circle.*

According to the regular method of finding intersections, we cut both surfaces by a horizontal plane, H, and where the two plane sections meet we shall have points of the section required.

The section of the sphere is a circle of centre, C. This is easily got; but the section of the cone will in this case have to be carefully delineated point by point, and will take a very long time to draw. We can dispense with this tedious labour by the following artifice:—

We produce a second cone, the vertex of which is the point S, vertex of the cone given, but the base of which is the circular section made in the sphere by the plane H. If we prolong that second cone, it will cut the plane of the plan according to a circle, G, the centre of which is C_2. The two cones having the same vertex cut one another along generators; and where the circle G, base of the second cone, meets the sinuous base B of the first cone, we have points belonging to the generators common to both cones. We can, therefore, draw the generators, and find the points m and n where they intersect the horizontal plane H; these points m and n belong to the curve of intersection of the cone by the sphere. The complete curve is drawn by operating on a series of horizontal sections.

Note.—This method applies to all surfaces, the horizontal sections of which are circles. This comprises a great variety of surfaces, some of which we have not yet seen; for instance, a surface engendered by a horizontal circle of varying radius, the extremities of which are bound to touch two lines in space as the circle moves up and down.

Proposed Widening of the Strand.—At the meeting of the Metropolitan Board of Works last week, Mr. J. Jones introduced a deputation from the Strand Improvement Association, who presented a memorial urging the Board to take steps to widen the Strand between the churches of St. Clement Dane's and St. Mary-le-Strand. The deputation consisted of Mr. A. W. Lightbody, Mr. T. H. Cole, Mr. Freeman, Mr. R. Davies, Mr. J. Seymour, and others. Mr. Lightbody, who spoke for the deputation, appealed to the Board to give the subject matter of the memorial their early and careful consideration, as they felt assured that such consideration could not fail to impress the Board with the absolute necessity of dealing with this question without further delay. In June, 1882, a similar memorial was presented to the Board, which met with such favourable consideration that a draft Bill was prepared to carry out the needed alteration. The traffic of the Strand had increased enormously of late years between the two churches at the eastern end, where both the roadway and the footways were much narrower than at any other part of the thoroughfare; the congestion of traffic was such as to cause serious inconvenience to the traffic and the traders, while there was also grave danger to life and limb. On the motion of Mr. J. Jones, the memorial was referred to the Works and General Purposes Committee for consideration and report.

Miscellanea.

Glasgow Institute of Architects. — The annual general meeting of this Institute was held last week in the Religious Institution Rooms, Buchanan-street, Mr. James Sellars, President, in the chair. Mr. William MacLean, writer, secretary, submitted the annual report, and Mr. William Landless, the treasurer, read the financial statement. The President, in moving the adoption of the report and treasurer's statement, referred to the shelved Burgh Police and Health [Building] Bill for Scotland. He also mentioned that the new rules for the measurement of mason work have been completed. They are the joint production of this Institute, the Institute of Measurers, the Master Masons' Association, and the Incorporation of Masons. Many points regarding which there was much diversity of opinion and practice have now been settled, and the President has no doubt that the new rules will be found to work well and beneficially in the interests of both proprietors and contractors. Mr. James Thomson, late President, seconded the motion, which was adopted. Thereafter the following were elected as members of Council for next year, viz.:—Messrs. T. L. Watson, David Thomson, James Thomson, Alexander Skirving, William F. M'Gibbon, James B. Lamb, Paisley; William F. Salmon, James Sellars, William Landless, Hugh Barclay, John Gordon, Messrs. George Bell, jun., architect, 212, St. Vincent-street; and Malcolm Stark, jun., architect, 167, St. Vincent-street, were elected members of the Institute. At a meeting of the newly-elected Council, held immediataly afterwards, the following office-bearers were elected, viz.:—Messrs. James Sellars, President; Hugh Barclay, Vice-president; Wm. Landless, 227, West George-street, treasurer; John Burnet, auditor; Wm. McLean, writer, 81, Bath-street, secretary.

The Institute of Builders.—The Institute of Builders has now removed to the new rooms which have been provided for its use at 31 and 32, Bedford-street, Strand, and it is believed that the increased facilities thus available for intercourse between the members will prove of great advantage. The following are some of the objects of the Institute:—To give the Legislature and public bodies facilities of conferring with persons engaged in the building trade, as regards matters affecting that trade. To improve and elevate the technical and general knowledge of persons engaged, or about to engage, in the building trade, and, with a view thereto, to provide for the delivery of lectures and the holding of classes, and to test by examination or otherwise the competence of such persons, and to award certificates and distinctions, and to institute and establish scholarships, grants, rewards, and other benefactions. To promote excellence in the construction of buildings. To encourage the discovery of and make known the merits of inventions of use to persons engaged in the building trade. To establish, form, and maintain a library for the use of members, together with a collection of models, designs, drawings, &c. To promote the consideration and discussion of all questions affecting the building trades. The President is Mr. Stanley G. Bird. Mr. Howard Colls, Mr. George Burt, J.P., Mr. F. May, and Mr. T. F. Rider, are the Vice-Presidents; and Mr. George Plucknett, J.P., is the Treasurer.

The Improvements at the Guildhall.—The scheme for the improvement and re-arrangement of the offices at the Guildhall has assumed more extensive proportions than was at first proposed. Of the present buildings the great hall, the library, and the new Council Chamber will alone remain untouched, a clean sweep being made of everything else north of the great hall. Even the aldermen's court, with its beautiful ceiling painted by Sir James Thornhill, will have to be pulled down, as it has been determined to raise the level of the floor of all the offices to that of the new Council Chamber. This will necessitate the addition of about five steps to the flight at present leading from the great hall to the offices. The present offices of the Commissioners of Sewers, part of which were only built in 1864, are to be rebuilt in a style in keeping with the library, between which building and the new offices a carriage-drive to the new Council Chamber will be made. The sites at present occupied by the Guildhall School of Music and the Secondary's Office, in Aldermanbury, will be cleared, and will be used in the scheme of reconstruction.—*City Press.*

The Mural Paintings in the Town-hall, Manchester.—Mr. Ford Madox Brown has just commenced another of the series of mural paintings, relating to the history of Manchester, with which the panels in the great hall of the Town-hall are gradually being embellished. The subject of the picture is "Chetham's Life Dream, A.D. 1640." The boys' school in Manchester which still bears the name of its founder, Humphrey Chetham, was established in accordance with the terms of his will in 1656. The school (combined with the library, also his gift) forms, no doubt, a precursor in the seventeenth century of those schemes, educational and philanthropic, which so prominently distinguish the nineteenth. Like his fellow-townsman Crabtree, Chetham was a "drapier" or cloth merchant, but his wealth, great for those days, was largely supplemented by financial transactions of a nature kindred to banking or money-lending. During his life he boarded out and educated twenty-two poor boys; after his death the number was to be augmented to forty,—a number which is now doubled, owing to the increased value of the bequest. In the painting, Chetham is represented as studying his will in the garden of the college, which, in imagination, he had peopled with his "forty healthy boys" and their pedagogue. The school cook is impatiently awaiting the butcher. The scholars are engaged in drilling, reading, leap-frog, wrestling, and a game called "stools,"—apparently the forerunner of cricket. The panel occupied by the new work is on the south side of the hall, and is next to the one in which is represented "Crabtree observing the transit of Venus." On the other side of the room, five of the six panels are filled in with the following subjects:—"The building of a Roman fort," "Baptism of Edwin, King of Northumbria," "Expulsion of the Danes," "Establishment of a Flemish weaver," and "Proclamation regarding Weights and Measures."—*Manchester Courier.*

New Town-hall, Edmonton.—The new Town-hall at Edmonton, recently erected, was designed to accommodate the Local Board, the Vestry, and the magistrates. The principal entrances are in Lower Fore-street, that leading to the ground-floor and principal staircase opening into a corridor, on each side of which are the offices of the Local Board and the Vestry, the offices of the Clerk to the Board and the Board-room being on one side of the corridor, and the engineer's offices and the offices to be used by the Vestry on the other side. At the end of the corridor are offices for the medical officer and the inspector of nuisances, and for the collectors. There are also rooms which were provided for male and female prisoners, should the magistrates make use of the building. For these there is a separate back staircase and a separate side entrance. The large hall is 94 ft. long and 38 ft. wide, and about 24 ft. high. The style of the building is Perpendicular Gothic. The cost, including furnishing, has been under 9,000*l.* The whole of the building is heated by hot-water pipes, worked by separate apparatus for the ground and first floors, the ground-floor being heated on Jones's low-pressure system, and the first-floor on Perkins's high-pressure system. The hall is illuminated by Sugg's burners, and ventilated by Boyle's apparatus. The building was designed by Mr. Eachus (the Engineer to the Local Board), with Mr. E. A. Ram as architectural assistant and Mr. Hamnett Furner as clerk of works, Mr. W. Tongue, of Woolwich, being the contractor. The railings round the buildings have been supplied by Mr. Rowe, of Edmonton. The fire-proof flooring on the first floor was laid by Messrs. Homan & Rodgers, and the concrete poving and stairs were provided and fixed by Messrs. Wilkins, of Newcastle.

A Military Memorial.—A large memorial tablet in memory of the officers who have fallen in battle while serving with the 22nd Regiment has just been placed in the south transept of Chester Cathedral. The tablet occupies the whole of the space from the floor line to the string course, and is executed in "opus sextile." The work was designed and executed by Messrs. Heaton, Butler, & Bayne, under the supervision of the architect, Mr. A. W. Blomfield.

Hyde Park Mansions.—With regard to the block of residential flats illustrated in the *Builder* for the 17th inst., Messrs. W. H. Lindsay & Co., of South Wharf, Paddington, ask us to state that they executed the whole of the iron-work.

Robert Boyle & Son (Limited).—We have received the prospectus of this company, which is being formed to take over, and appears likely to greatly extend, the well-known and old-established business hitherto carried on in London and Glasgow by the firm of Robert Boyle & Son, ventilating engineers. Mr. Robert Boyle will retain a large interest in the company, and will continue the active management and direction of the concern during the next five years, in the capacity of managing director. As will be seen by the prospectus, which is printed in full on the back page of this week's *Builder*, it is proposed that the new company shall extend its operations not only as ventilating engineers, but as heating and sanitary engineers,—branches of work which, it need hardly be said, are all more or less intimately related to and dependent upon each other. Messrs. Boyle & Son have achieved success as ventilating engineers, their Patent "Air-pump Ventilator" and other appliances having been very largely used; and the new company, with an extended field of operations before it, seems very likely to carry on and increase the success over a wider area of practical usefulness. In addition to its use in public buildings, churches, dwelling-houses, and factories, Messrs. Boyle's system of ventilation has been extensively used of late years on ship-board, and in this connexion we see that Sir E. J. Reed is to be associated with the company as Consulting Naval Engineer. Our own columns have from time to time borne testimony to the wide use of Messrs. Boyle & Son's appliances, and we have chronicled the many high-class awards which they have received in various exhibitions. From figures which have been placed before us there appear to be exceedingly good prospects as to the commercial success of the company.

Burrowbridge.—A report has recently been made by Mr. J. H. Spencer, architect, of Taunton, respecting the church in the village of Burrowbridge (near Bridgwater). It was built by the late Mr. Carver, about forty-five years ago. Mr. Spencer states that it is fairly substantial, but that the appearance of the interior is cold and displeasing, the chancel and chancel arch especially being poor and mean. Amongst the alterations suggested are the insertion of a new west window of Early English style, the enlargement of the chancel by the erection of suitable arches, the re-lining of the walls with coloured brick, arranged in various patterns, new pews, reredos, and pulpit. This report was read at a recent vestry meeting, resolutions were carried approving of the plans, and a committee was formed with a view of collecting funds. The amount required is 700*l.*

A Revised Award at the Inventions Exhibition.—Messrs. J. Defries & Sons, of Houndsditch, who were a few months ago awarded a silver medal for their safety lamp for the use of mineral oils as illuminants for domestic and other purposes, feeling dissatisfied with the award, brought the matter before the Jury Commission, who have, by their secretary, written to Messrs. Defries to say that, after careful consideration of the circumstances, the Commission hove decided that the award made to Messrs. Defries should be raised from silver to gold.

Eastbourne Sanatorium Competition.—We are informed that at the council meeting on the 26th inst., it was decided that the design having as motto "Compliance" be accepted. The successful competitor is Mr. Alfred A. Oakden, of Eastbourne. The accommodation provided is for forty beds, and the estimated cost is 5,500*l.*

Horsforth, Leeds.—Messrs. Powell Brothers, of Leeds, have just filled one of the windows at the west end of the Wesleyan Chapel here with stained glass by way of memorial to the late Mrs. Sackett, of Horsforth.

PRICES CURRENT OF MATERIALS.

TIMBER.	£. s. d.	£. s. d.
Greenheart, B.G. .....ton	6 10 0	7 10 0
Teak, E.I. .....load	12 10 0	15 10 0
Sequoia, U.S .....ft. cube	0 2 6	0 2 9
Ash, Canada .....load	3 0 0	5 0 0
Birch ,, ...	3 0 0	4 10 0
Elm ,, ...	3 10 0	5 0 0
Fir, Dantsic, &c.	1 18 0	4 10 0
Oak ,, ...	3 0 0	5 0 0
Canada	6 0 0	7 0 0
Pine ,, red	3 0 0	4 0 0
,, yellow	3 15 0	5 5 0
Lath, Dantsic .....fathom	5 0 0	6 0 0
St. Petersburg	5 0 0	7 0 0
Wainscot, Riga.....log	3 0 0	4 10 0

TIMBER (*continued*).	£. s. d.	£. s. d.
Deals, Finland, 2nd and 1st...std. 100	8 0 0	9 0 0
4th and 3rd ...	6 10 0	7 10 0
Riga ...	7 0 0	8 10 0
St. Petersburg, 1st yel. ...	10 0 0	17 0 0
2nd ,, ...	8 0 0	9 15 0
,, white ...	6 10 0	11 0 0
Swedish ...	7 0 0	17 0 0
White Sea ...	8 10 0	19 0 0
Canada, Pine 1st ...	18 0 0	32 10 0
2nd ...	12 0 0	18 10 0
,, 3rd, &c. ...	7 0 0	10 10 0
,, Spruce 1st ...	9 0 0	12 0 0
,, 3rd and 2nd ...	6 10 0	8 0 0
New Brunswick, &c. ...	5 0 0	7 10 0
Battens, all kinds ...	4 0 0	13 0 0
Flooring Boards, sq. 1 in.—Prepared, first ...	0 9 0	0 13 0
Second ...	0 7 6	0 8 6
Other qualities ...	0 5 0	0 7 0
Cedar, Cuba ... foot	0 0 3½	0 0 4
Honduras, &c. ...	0 0 3	0 0 4
Australian ...	0 0 3	0 0 3¼
Mahogany, Cuba ...	0 0 5	0 0 7½
St. Domingo cargo av. ...	0 0 5½	0 0 7½
Mexican ,, ...	0 0 4	0 0 5
Tobasco cargo av. ...	0 0 4	0 0 6½
Honduras cargo av. ...	0 0 4½	0 0 6½
Rose, Rio ... ton	7 0 0	17 0 0
Bahia ...	6 0 0	15 0 0
Satin, St. Domingo ... ft.	0 0 8	0 1 0
Porto Rico ...	0 0 8	0 1 3
Walnut, Italian ...	0 0 4	0 0 5
METALS.		
IRON—Pig in Scotland ... ton	2 2 6	0 0 0
Bar, Welsh, in London ...	4 15 0	5 2 6
,, ,, in Wales ...	4 7 6	4 12 6
,, Staffordshire, London ...	6 0 0	7 0 0
Sheets, single, in London ...	7 10 0	9 0 0
Hoops ,, ...	6 10 0	7 10 0
Nail-rods ,, ...	6 0 0	7 0 0

METALS (*continued*).	£. s. d.	£. s. d.
COPPER—		
British, cke. and ingt. ... ton	43 10 0	44 10 0
Best selected ...	44 0 0	46 0 0
Sheets, strong ...	52 0 0	0 0 0
,, India ...	0 0 0	0 0 0
Australian, fine cash ...	0 0 0	0 0 0
Chili, bars ,, ...	39 15 0	40 2 6
YELLOW METAL ... lb.	0 0 4½	0 0 4½
LEAD—Pig, Spanish ...	11 2 6	0 0 0
English, com. brands ...	11 10 0	0 0 0
SPELTER—		
Silesian, special ... ton	14 5 0	14 7 6
Ordinary brands ...	14 0 0	14 5 0
TIN—		
Straits ...	90 15 0	91 5 0
Australian ...	91 0 0	91 10 0
English ingots ...	93 0 0	0 0 0
TINPLATES—		
IC coke ... box	0 15 6	0 17 0
IX ditto ...	1 1 6	1 5 0
IC charcoal ...	0 17 6	1 0 0
IX ditto ...	1 6 0	1 7 0
OILS.		
Linseed ... ton	23 5 0	23 15 0
Cocoanut, Cochin ...	31 0 0	31 10 0
Ceylon ...	27 15 0	28 0 0
Copra ...	26 10 0	0 0 0
Palm, Lagos ...	29 10 0	30 0 0
Palm-nut Kernel ...	26 10 0	0 0 0
Rapeseed, English pale ...	23 5 0	0 0 0
,, brown ...	23 5 0	0 0 0
Cottonseed, refined ...	20 15 0	22 10 0
Tallow and Oleine ...	25 0 0	45 0 0
Lubricating, U.S. ...	7 0 0	10 0 0
,, Refined ...	8 0 0	15 0 0
TURPENTINE—		
American, in cks. ... cwt.	1 6 6	1 6 9
TAR—Stockholm ... brl.	0 19 6	1 0 0
Archangel ...	0 11 6	0 12 0

COMPETITIONS, CONTRACTS, & PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

COMPETITIONS.

Nature of Work.	By whom required.	Premium.	Designs to be delivered.	Page.
Public Offices ...	W. Hartlpl. Imp. Com.	25*l.* ...	Dec. 1st	ii.
New Offices ...	Stretford Local Board	30*l.*, 20*l.*, and 10*l.* ...	Dec. 5th	ii.
Designs, Specifications, and Estimates, for New College ...	Cncl. Univ. College of Wales, Aberystwyth ...	100*l.*, 50*l.*, and 25*l.* ...	Not stated	ii.
New Law Courts ...	Birmingham Corportn.	Not stated ...	do.	ii.

CONTRACTS.

Nature of Work, or Materials.	By whom required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
Blue Guernsey Granite and Kentish Flints ...	Acton Local Board ...	C. N. Lailey ...	Nov. 2nd	ii.
Granite, &c. ...	Dover Town Council ...	*Official* ...	Nov 3rd.	ii.
Kerbing, Tar-Paving, &c. ...	Lewisham Brd. of Wks.	do.	do.	ii.
Ventilating Dining-Hall of Workhouse ...	Guardns of St. Leonard, Shoreditch ...	F. J. Smith ...	Nov. 4th	ii.
New Goods Depot, Bread-street, E.C. ...	Great Northern Ry. Co.	Richard Johnson ...	Nov. 5th	ii.
Stabling for Horses, &c., St. Pancras ...	Midland Railway Co. ...	A. A. Langley ...	Nov. 6th	ii.
Dredging ...	Royal Arsenl, Woolwich	*Official* ...	Nov. 7th	xviii.
Making-up Carriageway ...	Hornsey Local Board ...	T. De Courcy Meade ...	Nov. 9th	ii.
Making-up Streets ...	Wandsworth Bd. of Wks	*Official* ...	Nov. 10th	ii.
Brick Culvert, and Alterations to Reservoirs ...	Southampton Corporatn	W. Matthews ...	do.	ii.
Making Roadway, Fencing, and Gates ...	do.	do.	do.	ii.
Kerbing, Paving, and Other Works ...	Hendon Local Board ...	*Official* ...	Nov. 11th	xviii.
Materials and Works (Main Drainage, &c.) ...	Met. Board of Works	do.	Nov. 12th	ii.
Underground Urinals, &c., Eastcheap ...	Com. of Sewers ...	do.	Nov. 13th	ii.
Gravelling, &c., of Walks ...	Met. Board of Works	do.	Nov. 17th	ii.
Kerbing and Asphalting Footpaths, &c. ...	Tottenham Local Board	— De Pape ...	do.	xviii.
Aqueduct, Thirlmere ...	Manchester Corporatn	G. H. Hill ...	do.	ii.
Stores and Materials ...	Cheshire Lines Com. ...	*Official* ...	Nov. 26th	xviii.
Iron Pier, Lee-on-the-Solent ...	...	E. A. Robinson ...	Dec. 5th	ii.
Offices and Chambers ...	...	Nixon & Raven ...	Not stated	xviii.
Detached Residences, Brentwood ...	...	Haltridge & Cubitt ...	do.	xviii.
Erection of a Villa Residence and Workshop	W. Franklin ...	...	do.	xviii.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.	Page.
Surveyor's Temporary Assistant ...	Chelsea Vestry ...	2*l.* 2s. per week ...	Nov. 3rd	xvi.

TENDERS.

BRIGHTON.—For building additional premises to Palmeira House, Western-road, Hove, for the Brighton and Hove Co-operative Supply Association. Messrs. T. Lainson & Son, architects :—

W. A. & B. Field ...	£8,137 0 0
G. R. Lockyer ...	7,931 0 0
Cheeseman & Co. ...	7,600 0 0
W. Hackman ...	7,500 0 0
G. Howard ...	7,109 0 0
J. Barnes ...	6,950 0 0

CAMBRIDGE.—For proposed new wing to St. John's College, Cambridge. Mr. F. C. Penrose, architect, Chapter House, St. Paul's, London. Quantities by Messrs. J. E. Goodchild & Son, Finsbury-pavement, London, E.C. :—

Thompson, Peterborough ...	£9,495 0 0
Rollinson, Chesterfield ...	9,024 0 0
Loveday ...	8,769 13 0
Sindall, Cambridge ...	8,600 0 0
John Bentley, Waltham Abbey ...	8,349 0 0
Horseman ...	8,274 0 0
John Parnell & Son, Rugby ...	8,197 0 0
William Bell & Sons, Cambridge ...	7,997 0 0
Thos. Wontner Smith & Son, London* ...	7,900 0 0

* Accepted.

CHELSEA.—For new schools, Flora-gardens, Chelsea, for the School Board for London. Mr. T. J. Bailey, architect :—

Chamberlain Bros. ...	£15,890 0 0
Godfrey & Son ...	12,866 0 0
Shillitoe & Son ...	12,245 0 0
W. Tongue ...	11,862 0 0
Kirk & Randall ...	11,820 0 0
F. Sargeant ...	11,772 0 0
Keyes, Head, & Co. ...	11,760 0 0
Wall Bros. ...	11,675 0 0
J. Grover & Son ...	11,527 0 0
Priestley & Gurney ...	11,404 0 0
E. C. Howell & Son ...	11,404 0 0
Wm. Brass & Son ...	11,315 0 0
T. Oldrey ...	11,300 0 0
W. Downs ...	11,150 0 0
J. Johnson ...	11,136 0 0
S. J. Jerrard ...	11,131 0 0
H. Hart ...	11,120 0 0
J. Holloway ...	11,100 0 0
Patman & Fotheringham ...	11,095 0 0
W. Shurmur ...	11,087 0 0
H. L. Holloway ...	11,047 0 0
F. & F. J. Wood ...	11,030 0 0
Stimpson & Co. ...	10,980 0 0
Atherton & Latta ...	10,947 0 0
Lathey Bros. ...	10,876 0 0
C. Wall ...	10,655 0 0

CARLTON (Notts.).—For draining, metalling, and kerbing in the forming of paths and roads at the new Cemetery, Carlton, near Nottingham. Mr. Robt. W. Clarke, architect, Nottingham :—

John Smith, Belgrave, Leicester ...	£1,086 7 7½
W. E. Hopkin, Sutton-in-Ashfield ...	947 0 0
H. Vickers, Nottingham ...	9 0 0 0
Foster & Barry, Nottingham ...	850 0 0
J. A. Dawson, Lincoln ...	798 10 0
W. Cordon, Burton Joyce ...	706 16 10
T. Wilson, East Markham (accepted)*	652 0 0
John Shortland & Co., Nottingham .	623 7 8

* Mr. Wilson has the contracts for the chapel, lodge, and boundary-wall in hand.

DALSTON.—For alterations, &c., at the Duke of Richmond public-house, Queen's-road, Dalston. Mr. R. A. Lewcock, architect :—

R. Marr ...	£293 0 0
J. Anley ...	285 0 0
W. Shurmur ...	279 0 0
S. Hayworth ...	274 0 0
Jackson & Todd ...	257 0 0
W. Pringle ...	245 0 0
Steel Bros. ...	230 0 0

DORSET.—For sanitary work in connexion with new wing to Chalmington House. Mr. Mark H. Judge, architect and surveyor :—

Conway (accepted) ...	£132 4 10

EALING (Middlesex).—For making-up Hambledon-road, for the Ealing Local Board :—

Seward ...	£947 8 8
Nowell & Robson ...	905 0 0
Kellett ...	894 0 0
Bath ...	879 0 0
Mowlem ...	869 0 0
Constable ...	799 0 0
Pizzey (accepted) ...	777 0 0

EASTBOURNE.—For superstructure of a dwelling-house in the Carlisle-road, Eastbourne, for Mr. R. W. Tweedie. Mr. Wm. Kidner, architect, Old Broad-street, London, E.C. :—

Laing & Son, London ...	£5,561 0 0
Peerless, Eastbourne ...	4,691 0 0
Newman & Hart, Eastbourne ...	4,593 0 0
Punnett, Tonbridge (accepted) ...	4,569 0 0
Rodda, St. Leonard's-on-Sea ...	4,500 0 0
Longley, Crawley ...	4,490 0 0

HACKNEY.—For re-building the Tabernacle, Chatsworth-road, Clapton Park, for the Rev. T. Jackson. Messrs. Kerridge & Son, architects :—

R. W. Spelt ...	£1,798 0 0
Barber, Son, & Lutwyche ...	1,550 0 0
J. W. Dixon & Co. ...	1,423 0 0
G. Bysouth ...	1,380 0 0
J. Jarvis & Hammond ...	1,330 0 0
W. Shurmur ...	1,278 0 0
J. W. Wilkinson ...	1,268 0 0
H. Rands & Son ...	1,225 0 0
H. Dearsley ...	1,239 0 0
J. Godfrey & Son ...	1,224 0 0
R. Swan ...	1,214 0 0
Bennett Bros. ...	1,200 0 0
H. Winkley ...	1,150 0 0
J. Garrud ...	1,137 0 0
F. Challis ...	1,137 0 0

HOLLOWAY.—For additions to No. 5, Northampton Villas, Seven Sisters. Mr. C. W. Lovett, architect :—

Canning & Mullins ...	£1,065 0 0
W. Shurmur ...	990 0 0
Stevens Bros. ...	885 0 0
W. & F. Croaker ...	850 0 0

KENT.—For the erection of new stables and coach-house, Westcombe Park, Kent, for Mr. W. C. Johnson. Mr. Douglas Hoyland, architect. Mr. T. Marcus Hoyland, surveyor :—

H. Bridel ...	£720 0 0
H. L. Holloway (accepted) ...	719 0 0
J. O. Richardson ...	717 0 0

LONDON.—For the erection of new schools in Coburg-road, in the Lambeth Division, for the School Board for London. Mr. Thos. J. Bailey, architect :—

J. Godfrey & Son ...	£14,986 0 0
Tongue ...	14,360 0 0
Shepherd ...	14,330 0 0
J. Shillitoe & Son ...	14,303 0 0
W. Shurmur ...	14,089 0 0
F. & F. J. Wood ...	13,773 0 0
Priestley & Gurney ...	13,500 0 0
Lathey Bros. ...	13,489 0 0
J. Grover & Son ...	13,456 0 0
C. Cox ...	13,287 0 0
Wall Bros. ...	13,234 0 0
W. Johnson ...	13,094 0 0
H. Hart ...	13,072 0 0
E. C. Howell & Son ...	13,034 0 0
Kirk & Randall ...	12,998 0 0
Stimpson & Co. ...	12,998 0 0
W. & F. Croaker ...	12,953 0 0
S. J. Jerrard ...	12,929 0 0
Atherton & Latta ...	12,900 0 0
J. Holloway ...	12,900 0 0
W. Downs ...	12,849 0 0
W. Oldrey ...	12,500 0 0
W. Brass & Son ...	12,450 0 0
C. Wall ...	12,253 0 0
H. L. Holloway ...	12,163 0 0

LONDON.—For building a new brick sewer and repairing old sewers, for the Holborn District Board of Works :—

Williamson ...	£2,929 0 0
Stubbs ...	2,499 0 0
Walker ...	2,399 0 0
Turner ...	2,325 0 0
Pizzey ...	2,198 0 0
Mowlem ...	2,150 0 0
Killingback (accepted) ...	1,969 0 0

LONDON.—For sundry additions to brewing plant, at the Lion Brewery, Broad-street, Golden-square, for Messrs. Huggins & Co., to the designs and under the superintendence of Messrs. Scamell & Colyer, civil engineers, 18, Great George-street, Westminster :—

R. Moreland & Sons, London ...	£2,380 0 0
Thornewill & Warham, Burton-on-Trent (accepted) ...	1,557 0 0

LONDON.—For enlargement of Wesleyan Mission premises, Cable-street, St. George's-in-the-East. Mr. F. Boreham, architect :—

L. H. & R. Roberts	£1,398	0	0
J. D. Hobson	1,394	15	0
J. Grover & Son	1,297	0	0
Harris & Wardrop	1,269	0	0
G. S. Williams & Co.	1,260	0	0
J. Holloway	1,190	0	0
J. Allen & Son (accepted)	1,068	0	0

LONDON.—For alterations, &c., at the Tramway Terminus Inn, No. 9, Blackfriars-road, for Mr. J. Muncy. Mr. E. H. Burnell, architect :—

Bagelly	£583	14	0
W. Downs	549	0	0
Holloway Bros. (accepted)	542	0	0

LONDON.—For sanitary improvements, including new drains in concrete, at 22, Sussex-gardens, Hyde Park, W., for Mrs. Gillespie. Mr. Mark H. Judge, architect and surveyor :—

Andrews (accepted)	£110	5	0

MARYLEBONE.—For enlargement of schools, Barrett-street, Marylebone, for the School Board for London. Mr T. J. Bailey, architect :—

F. & F. J. Wood	£2,568	0	0
F. Sargeant	2,274	0	0
S. Pritchard	2,233	0	0
Macey & Son	2,231	0	0
Godfrey & Son	2,188	0	0
Atherton & Latta	2,169	0	0
E. C. Howell & Son	2,100	0	0
J. Manley	2,093	0	0
Wm. Brass & Son	2,054	0	0
S. J. Jerrard	1,998	0	0
Williams & Son	1,994	0	0
J. Grover & Son	1,994	0	0
T. Oldrey	1,993	0	0
H. L. Holloway	1,993	0	0
W. Shurmur	1,959	0	0
Priestley & Gurney	1,945	0	0
Wall Bros.	1,915	0	0
Lathey Bros.	1,895	0	0
Stimpson & Co.	1,833	0	0
J. Holloway	1,805	0	0
C. Wall	1,768	0	0

MOULSOE (Bucks).— For the addition of a new class-room and repairs to the National Schools, for the Right Hon. Lord Carrington. Mr. J. Carter Jonas, surveyor, Cambridge :—

Samuel Poster, Bedford (accepted)	£197	10	0

NOTTINGHAM.—For the erection of cricket pavilion, Nottingham, for the County Club. Mr. H. M. Townsend, architect, Peterborough. Quantities by Mr. H. Lovegrove :—

G. Bell & Son, Nottingham	£5,117	0	0
C. Baines, Newark	4,920	0	0
E. Hind, Nottingham	4,882	0	0
Dennett & Ingle, Nottingham	4,741	0	0
H. Vickers, Nottingham	4,652	0	0
J. J. Adams, Nottingham	4,538	0	0
T. Fish & Son, Nottingham*	4,033	0	0

* Accepted.

OLD FORD.—For alterations and other works proposed to be done at the John Bull public-house, Roman-road, Old Ford, E. Mr. R. H. Lewcock, architect :—

Mower	£1,120	0	0
Shurmur	1,089	0	0
Jackson & Todd	1,049	0	0
Spencer & Co.	1,040	0	0
Walker	993	0	0
Roome	986	0	0
Pringle	980	0	0
Russell	970	0	0

RYDE (I.W.).—For dwelling-house at Springvale, near Ryde, I.W., for Mr. H. Dodsworth. Mr. Stephen Salter, jun., architect, Union-street, Ryde :—

James & Wheeler	£935	10	0
Smith & Son	820	0	0
James Cook	764	15	0
Isaac Barton, Ryde (accepted)	747	0	0

STOKE NEWINGTON.—For alterations at the Marquis of Lansdowne, Stoke Newington-road. Mr. R. A. Lewcock, architect :—

W. Pringle	£1,545	0	0
S. Goodall	1,531	0	0
W. Shurmur	1,496	0	0
Steel Bros.	1,435	0	0
Jackson & Todd	1,356	0	0
R. Burton	1,349	0	0

STOKE NEWINGTON.—For pulling down the Caledonian public-house, Stoke Newington-road, and erecting five shops on site. Mr. J. J. Stiles, architect :—

W. Good	£4,305	0	0
Steel Bros.	4,135	0	0
W. Shurmur	3,879	0	0
S. Goodall	3,814	0	0
G. Mower	3,679	0	0

STREATHAM.—For making new road and laying down pipe sewer at Streatham :—

Rigby	£750	0	0
Newman	685	0	0
Smith	615	0	0
Pizzey	578	0	0
R. Neal (accepted)	473	0	0
Etherell	469	0	0

TUNBRIDGE.—For the erection of the Lodge, at Roughway Paper-mills, near Tunbridge, Kent, for Messrs. R. D. Turner & Co. Mr. H. Percy Monckton, architect, Great James-street, W.C. :—

Allcorn & Sons (accepted)	£170	0	0

WOODFORD (Essex).—For erecting house, Tavistock-road, Woodford. Mr. B. High, architect :—

W. Shurmur	£1,142	0	0
J. Hack	1,134	0	0
M. Wells	1,027	0	0

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